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The primary focus was on the impact of vocational programs on educational achievement, job training, and job placement of disadvantaged youth. Procedures were developed to insure coverage of all major categories of the disadvantaged, all major areas of vocational education, pre-vocational programs, comprehensive regional coverage, and private as well as public schools. No exemplary programs were found, but 30 secondary level programs were eventually selected as case studies. Site visits were made for program staff interviews and observations of students, facilities, equipment and "climate." The evidence suggests that vocational education for the disadvantaged is limited and highly variable in effectiveness in that the most seriously disadvantaged received the poorest education. It was concluded that truly exemplary programs could be built upon the exemplary features identified and presented in this study. (CH)

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FINAL REPORT

AN IDENTIFICATION AND ANALYSIS OF EFFECTIVE SECONDARY LEVEL VOCATIONAL PROGRAMS FOR THE DISADVANTAGED

VT007818

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FINAL REPORT

1 AN IDENTIFICATION AND ANALYSIS OF EFFECTIVE SECONDARY LEVEL VOCATIONAL PROGRAMS FOR THE DISADVANTAGED. Final Report.]

Submitted Under the Provisions of
Contract Number OEC-0-8-089015-3344(010)

to

Mr. Howard L. Vincent, Project Officer
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U. S. Office of Education
400 Maryland Avenue, S.W. - Room 4091
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December 15, 1968

Mr. Howard L. Vincent, Project Officer
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Dear Mr. Vincent:

Herewith we submit our report entitled, "An Identification and Analysis of Effective Secondary Level Vocational Programs for the Disadvantaged." This report is presented in three parts: Part I contains a summary of the report, and is designed for the reader interested only in the major findings and conclusions. Part II contains guidelines for developing model programs and case studies of 30 effective programs. Part III presents the theoretical framework, methods and techniques, results, discussion, and implications of the study.

This project was conducted under the provisions of RFP OE-68-9 and is termed Contract Number OEC-0-8-089015-3344(010).

In conducting this study, we identified more then 200 vocational education programs that, in varying degrees, are serving secondary level disadvantaged students. We found these programs by contacting state directors of vocational education, staff members in the U. S. Office of Education, staff of professional associations, foundation executives, etc. Through site visits, telephone queries, and mail surveys, we gradually narrowed this list down by applying increasingly rigid criteria to enable us to study the most effective programs in vocational education for disadvantaged students in the United States.

The primary focus was on the impact of vocational programs on educational achievement, job training, and job placement of disadvantaged youth.

Our basic conclusions and findings are: There are approximately 11.2 million youth 14 to 17 years of age in this country and about 10% are disadvantaged. Very few are being served by exemplary vocational programs. We found a few programs that were better than average in effectiveness. In addition, we found that there is almost a total lack of data collection, testing, and evaluation in the programs in existence. Thus, it was next to impossible to measure, in any meaningful way, pre and post-program experience. We concluded that effective programs can be built upon the exemplary features identified in this study.

The study was under the direction of Louis R. Decker, Ph.D., Project Director, SERD, Inc. He was assisted by Mrs. Marilyn DePoy Russo, Economist; Mrs. Joyce R. Epstein, Research Associate; and Mrs. Barbara J. Stembridge, Research Assistant, all of SERD.

Within the Federal Government, we are most grateful for the kind assistance, patience, and cooperation from you. Also, within the Division of Vocational and Technical Education, we received a great deal of assistance from Mr. Michael Russo, Chief, Planning and Evaluation Branch; and Mrs. Barbara Kemp, Senior Program Officer, and Mr. Albert L. DeMond, Program Officer, Special Needs Program. In the Bureau of Adult and Vocational Education, Mr. Bernard Michaels, Program Planning Officer, has been most cooperative.

Outside the Federal Government, we met with and received the assistance from a number of people within foundations and state and local governments.

As a result, we were able to clarify many errors and discrepancies. However, the responsibility for this report rests with this firm.

Sincerely,

John W. McCollum

John W. McCollum
President

JWM:sc
Enclosure

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We gratefully acknowledge the time and effort contributed to this project by the following persons:

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PART I

INTRODUCTION AND SUMMARY

PART I

I. INTRODUCTION, SUMMARY, AND CONCLUSIONS

A. Introduction

Part I introduces our study. It presents the focus; the purposes and objectives; the important findings and conclusions; the background of the study; and describes the remaining chapters.

B. The Problem

Our purpose was to identify and analyze "effective" vocational education programs for disadvantaged[1/] students (ages 14-20) in secondary schools.

The need for this study stems from the fact that in terms of vocational education for the disadvantaged secondary students much more needs to be known about the impact (in all ramifications), vocational education has on students, how best to order and structure programs and what constitutes an effective vocational education program.

This study is an initial--and modest attempt at providing information in these areas.

C. Findings and Conclusions

The evidence suggests that vocational education for the disadvantaged is limited and highly variable in effectiveness and that the most seriously disadvantaged receive the poorest education. However, several programs have been developed which contain highly effective elements. The number and types of disadvantaged students presently being served are only a small portion of the total.

These are the major findings:

Number 1: We screened more than 200 programs and did not identify a singly truly exemplary program. However, we found a number of better than average programs and programs with exemplary features.

Number 2: The task was difficult because of the failure of many schools to generally test students and to measure achievement in reading and mathematics, behavioral changes, and in other criteria areas of this study. We also found little emphasis placed on follow-up of students who have completed programs. Finally, proper data does not exist to perform sound cost-effectiveness analysis. The analysis of the programs presented in this study should, therefore, be considered preliminary and suggestive. The selection of effective programs is based mainly on the findings outlined in Finding Number 5.

1/ For our definition, see "G. The Scope of this Study," page 6.

Number 3: Quality programs tend to serve populations that are both highly homogeneous and very small. There were few exemplary programs serving inner-city, hard-core disadvantaged youth with low I.Q.'s and achievement levels and with past histories of personal and social disorganization.

Number 4: There is strong leadership at the federal, state and local levels for good vocational education for the best students, but only a few voices can be heard for the disadvantaged.

Number 5: Few of the traditional vocational programs serving the disadvantaged succeed in providing both quality education and quality training. With few exceptions, these youth are receiving minimal training to qualify them for terminal positions in low skill areas. However, among the newer programs designed more specifically to serve the disadvantaged, this study identified a number of common (and some unique) elements of effectiveness or success factors. Appendix H, page 304, contains a list of these elements of effective programs (which are summarized below) keyed to the location of these elements in specific case studies. Thus, Appendix H indicates that the element of effectiveness which we summarized as structured programs with a built-in flexibility is illustrated by Case Number 3, where the flexibility is the utilization of industry personnel in a structured setting. Case Number 7 is also an example in part, because the flexibility factor is entrance requirements. Cases 15, 39, and 40 illustrate where the flexibility factor presents fulfillment of academic courses through "catchall courses." The factors include:

--Structured programs developed within a flexible framework provide the most suitable atmosphere for learning and social development. In conventional thinking, this would seem to be a contradiction in terms, yet the more effective programs have succeeded in making flexibility a part of the structure. The needs of both students and teachers demand a disciplined situation in which direction can be given and accepted in a climate of mutual respect and understanding.

--The vocational aspects of a program are more successful when offered in combination with pre-vocational and post-vocational programs with strong academic components. In these cases, the vocational training, per se, is part of a cycle in which the basic academic needs of the students are met. The student is introduced to job clusters, opportunity is provided for making a vocational choice, and training is offered with a view toward an expanding job market and future steps on the job ladder in the specific vocational field.

--Cooperative work education programs are highly successful.

--Small school enrollments contribute to a successful climate.

--Allowances for individualized study and progression in small classrooms--in which the student develops at his own pace--are almost mandatory, although this should not be interpreted to be a mandate for the development of unstructured programs. The successful programs are able to provide these elements within the structure of a grading system, testing, certification, etc.

--Programmed materials and work stations can be successfully used to permit access into programs by dropouts from regular programs and for individualizing instruction.

--Most programs encourage experimentation and innovation.

--A wide range of modern teaching devices and the latest equipment and facilities are desirable, but not necessary. Success with techniques such as team teaching and multi-media approaches, e.g., newspapers as major text can be, and is being achieved without large expenditures. The crucial element remains the desire of the teaching staff to teach the disadvantaged.

--The best teachers are those who are both experienced and youthful in age and/or outlook. They are attracted to the programs by social service needs, additional pay, greater freedom to exhibit and exercise professional competence, and smaller classrooms. Teacher peer ratings and actual observations of classroom techniques are useful in selection.

--Effective programs usually can be traced to the efforts of a single individual.

--Teacher aides selected from the disadvantaged group, integrated faculties, and minority group members in senior positions, contribute to program effectiveness.

--Successful programs use incentive systems, rewards, and certificates to build individual and school pride.

--New students are attracted to successful programs primarily by other students, with parents and supporting agencies being secondary resources.

--There is a direct relationship between program success in reducing dropout rates and community and parental support and involvement.

--Successful programs use multi-agency approaches, extensive supporting services, and a range of extra-curricular activities.

--The best programs do not water down their standards, but, through objective evaluation, are able to adjust unrealistic, outdated, or irrelevant standards that may adversely affect chances of success.

--Successful programs place students in training-related jobs, not just any job.

--It is feasible, desirable and practical to use tests in non-threatening ways.

--Successful programs measure progress (achievement, placement, and follow-up) systematically.

In summary, we feel that exemplary programs should and can be built around these success elements identified in this study.

D. The Objectives

This study had these objectives:

1. Identifying, measuring, and comparing disadvantaged students enrolled in vocational education programs. The major bases of comparison were increments in educational achievement and success in placement.
2. Identifying and evaluating behavorial changes that occur in effective vocational programs for the disadvantaged.
3. Identifying the components or factors that make programs effective.

E. Background

The Vocational Education Act of 1963,[2] was an attempt to link vocational education more closely with the changing economic and social environment. The Act represents, in part, an attempt to answer a series of major criticisms directed over the years toward vocational education. These criticisms ranged from the charge that many vocational programs are "dumping grounds" for slum youth and problem children, while at the other extreme, vocational education has been criticized for "creaming off" the best students for the most effective programs. Another major problem was that programs were slow in changing to meet changes in the work world.

The 1963 Act is being revised in Congress. A feature of the current bill is that it would amend the Act of 1963, by making funds available for exemplary programs and projects. Of particular interest to this project is the provision that the states specifically earmark funds for the disadvantaged.[3]

In January 1968, the Office of Program Planning and Evaluation in the Office of Education entered the research and evaluation picture by requesting proposals for:

> "The identification and in-depth analysis of vocational programs which have demonstrated the ability to deal with the needs of disadvantaged youngsters. Emphasis will be placed on providing quantitative evidence of successful vocational programs and detailed analysis of the ingredients of their success. The main criteria for success will be incremental increases in achievement scores and reduction of dropout rates."[4]

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[2] P. L. 88-210.

[3] U. S. House of Representatives, Committee on Education, 90th Congress, Second Session, Hearings Before the General Subcommittee on Education; Partnership for Learning and Earning Act of 1968, Washington, D.C.; U. S. Government Printing Office, 1968; page 13.

[4] Office of Education, RFP No. OE-68-9, U. S. Department of Health, Education and Welfare, Washington, D.C., January 23, 1968, (mimeographed).

Social, Educational Research and Development, Inc., received a contract effective March 11, 1968, to conduct the study in response to the above procurement request.

F. The Rationale for this Research

There are several issues concerning the relationship between vocational education and the needs of disadvantaged youths. Most come from families living in social situations where they have an inadequate exposure to the world of work. Many drop out of school at the junior high school level and leave with little or no vocational education experience. Too few of those who stay in school receive effective or meaningful vocational or general education.

There are many approaches to vocational education--should it be prevocational, should it train for narrow jobs, should it link vocational and general education or should it relate to the needs and orientations of the students? These several approaches, the nature of the labor market, and the needs of disadvantaged students suggest that vocational education for all and especially for the disadvantaged ought to be a vehicle that:

1. Increases the intellectual skills and competencies of students.
2. Relates to students in terms of their interests, and thus makes schooling meaningful.
3. Provides broadly based general and social education and vocational training at the same time.
4. Results in successful placement and job satisfaction in training related occupations.

G. The Scope of This Study

The original procurement for this study contained the three key words or phrases "vocational education programs," "disadvantaged," and "effective," which require definition.

We pointed out earlier that considerable latitude is allowed state and local authorities in establishing definitions of "vocational education programs." For this study, the definition found in the U. S. Office of Education Rules and Regulations will be employed.[5]

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[5] Administration of Vocational Education Rules and Regulations; Bulletin No. 1, Revised 1966; OE No. FS 5.280.80017; U.S. Government Printing Office; Washington, D.C.; pages 14-18.

Secondly, the word "disadvantaged" has been applied to many groups and with reference to a variety of characteristics. The basic definition adopted here is: "disadvantaged" applies to youth who come from families meeting either the Office of Economic Opportunity or the Office of Education, Title I, (ESEA) income definitions.[6] After income, our definition incorporates the list of characteristics the Division of Vocational and Technical Education of the Office of Education uses as guidelines for identifying the disadvantaged.[7] This list includes: educational background, health, cultural isolation, lack of motivation, etc.

The third term "effective," in relation to vocational education programs, is much more difficult to define. A conceptual framework for the consideration of effective programs is presented in Chapter III, Part III, and is summarized in the next section. For present purposes, the term may be said to refer to one of two types of programs, the "truly effective" and the "better than average."

The truly "effective" program is seen as an exemplary effort; that is, clearly outstanding. It will have been in existence for some period of time, will have been able to demonstrate reasonably well in about every criterion selected for study, and show a marked change and/or improvement in student behavior and achievement.

The "better than average" program is one for which the evidence is not as convincing or complete. It might also serve a population somewhat less disadvantaged than is the case with "truly effective" programs. It would be expected that these programs are moving in the direction of "truly effective" programs and might, in time, qualify for inclusion in that category.

This study sought a large coverage of vocational programs. Procedures were developed to insure insofar as was possible, coverage of all major categories of the disadvantaged, all major areas of vocational education, pre-vocational programs, comprehensive regional coverage, and private as well as public schools. Manpower Development and Training Act (MDTA), Neighborhood Youth Corps (NYC), and similar programs were excluded from the survey except in one or two cases where close liaison with the public school system existed.

Techniques employed were literature searches, interviews, and mail and telephone inquiries. Referrals were analyzed in terms of: criteria of effectiveness, representativeness in terms of types of programs, geographical coverage, availability of data and willingness to cooperate. A decision was made to intensively study a program to the extent it fulfilled the above requirements. About 40 programs were eventually selected from more than 200 referrals. Unfortunately, it was necessary to select programs for intensive study before all referrals were obtained so that nationwide achievement testing programs could be completed before schools closed for the summer. The effect of this constraint was the inclusion of a number of programs that fall at the lower end of the continuum with regard to being exemplary and the exclusion of programs which should have been intensively studied. The net effect, however, was positive since it resulted in a wider range of effectiveness than originally planned. Another change was the inclusion of several "one-of-a-kind" programs which were judged to be worthy of intensive study.

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[6] Generally speaking, this is an average family income of less than $3,000.

[7] The reader is referred to Appendix A which contains a summary of major points developed by the U. S. Office of Education for use in developing programs for persons with special needs. It also contains provisions of the Vocational Education Act of 1963 relating to persons with special needs.

The basic methodology to intensively study a program was the case study approach which was implemented through site visits during which program staff were interviewed and observations made of students, facilities, equipment, and "climate." In addition, data were collected from schools using specially designed data forms and the administration of nationally standardized reading and mathematic achievement tests.

The data were analyzed according to the criteria of effectiveness used in this study. (See Appendix F).

H. Organization Of This Report

The remainder of this report is organized as follows:

Part II contains Chapter II which is divided into three major sections: an introduction, a section containing guidelines for model programs, and the case studies.

Part III contains five chapters as follows: Chapter III presents the conceptual framework and rationale for the study; Chapter IV contains the methods and procedures; Chapter V presents the detailed results in terms of the following five categories of intensively studied programs: Dropouts/ Potential Dropouts (Large Inner-City/Suburban), Dropouts/Potential Dropouts (Rural and Small City/Suburban), Mental and/or Functionally Retarded, Delinquents, and Non-English Speaking Minorities; Chapter VI discusses the significance of the results; and Chapter VII presents the implications of the study.

The Appendices provide supporting data for the findings.

PART II

GUIDELINES FOR MODEL PROGRAMS AND CASE STUDIES

PART II

II. MODEL PROGRAMS AND CASE STUDIES

A. Introduction

The remainder of Chapter II is divided into two major sections. The first section describes exemplary features identified in this study which could be included in model programs. The second section presents detailed case studies of 30 intensively studied programs distributed among the following five program categories: Dropouts/Potential Dropouts (Large Inner-City/Suburban); Dropouts/Potential Dropouts (Rural and Small City/Suburban); Mental and/or Functionally Retarded; Delinquents; and Non-English Speaking Minorities.

To assist the reader, an index precedes the case studies, on page 20. Also, Appendix H, page 304, is a table in which the factors of effectiveness are keyed. to the cases in which they were found.

B. Model Programs

As evidenced in this study, there is no single model program which can serve as a prototype for all vocational training settings. What does exist are model elements that can be keyed to specific target populations and vocational offerings. In this section, we present the elements of model programs in terms of five questions that a pragmatic administrator would ask in an effort to improve his vocational program for the disadvantaged.

1. What should be taught?
2. How should instruction be carried out?
3. What school and community elements are important?
4. What supporting services are needed?
5. What priority and sequence should be followed in implementing a program?

Our answers to these questions, based on actual cases studied, follow.

1. What should be taught?

a. We found that the net effect of pre-vocational training is to hold youth in school for further vocational training. The better programs provide exposure to a variety of jobs, attitudinal development and change, and diagnosis of individual strengths and weaknesses for various occupations. Above all, successful programs lay the foundation for sound occupational choice and avoid offering pre-vocational training that is unrelated to vocational training. For the best pre-vocational program we found, see Case Number 14.

b. Of the programs studied, two successful ones provided training in jobs that students perceived as being significant and having a future.

The administrators adopted a curricula which did not lock a student into a narrow, dead-end speciality. These programs even allow students to pursue simultaneously pre-college and vocational skill training. (See food service program in Case Number 15--where 60% of the students pursued post-graduate training, and Case Number 9). Paramedical, graphic arts and the newer aerospace technologies also permit branching. (Case Numbers 39, 9, and 7). For the mentally and functionally retarded, the concept of branching needs to be modified. For these groups, highly specialized training for limited jobs is required. But even here, there are possibilities of making training significant, e.g., photo-copying and duplicating machine operation in graphic arts programs and obtaining contract assembly work to establish a sheltered workshop in the high school.

c. We found a number of programs that try to link vocational and general education--these links were forged in terms of the needs and interests of the students. We feel that this is an essential element in any program aimed at the disadvantaged. The schools studied concur. The administrator is not advised to go to the expense and difficulty of developing curricula and materials. He should use commercially available materials or materials presently in the public domain that have been developed for disadvantaged populations. The reader is referred to Case Numbers 7, 9, 12, 14, 15, 16, 17, 39 and 40.

d. For non-English-speaking groups, care should be taken in curricula and teaching techniques to increase pride and understanding in the native culture, as well as to increase understanding and appreciation of the larger America. This may be accomplished through bi-lingual and bi-cultural programs and by giving the non-English-speaking community a voice in the program. (See Case Number 32).

e. For Negro youth, we found that teaching Negro culture, history, and accomplishments enhances all other instruction--including vocational--because it improves student morale, pride, and self-perception. (See Case Number 7.)

2. How should instruction be carried out?

a. Concurrent Work Education Programs are one of the best ways we found for keeping youth in school and providing them with an incentive to learn a vocation. The community aspect of work experience is invaluable, not only in bringing the youth in contact with the community, but in bringing the community in contact with the youth. We found several good models for concurrent work education programs. This is one element of effectiveness that is applicable to all groups of the disadvantaged.

In terms of models that can be easily applied, we suggest the following:

--Inner-City Youth - Case Number 7

--Rural/Small Town Youth - Case Number 17

--Functionally and Mentally Retarded - Case Number 6

If the reader is interested in the feasibility of a pre-vocational work education program, he is referred to Case Number 16. Although the number of students involved is small and they are not highly disadvantaged, it represents an approach to keep youth in school during the critical transition period when they can legally drop out of regular school.

The following elements are essential in any work-study program:

--Basic skill training keyed to basic education and taught on an individual basis.

--Flexible scheduling--Generally speaking, split day plans are easier to manage for both schools and employees, but flexibility should not be ignored.

--Course credit should be received for the program.

--Minimum wage standards should be adhered to, if the student is performing a regular and necessary job. Care should be taken to assure that co-op students are not used as cheap labor to replace higher-paid workers.

--Controls and incentives are needed to keep students from using the programs as a job placement service (See Case Number 25), and to keep the schools from writing off their responsibilities for basic skill and knowledge education.

--The Coordinator is the key factor in successful programs.

--Job opportunities should be identified in clusters for given target populations. The service and distributive fields offer vast opportunities. Job rotation and education should be open-ended and such that a student can broaden his skill areas and eventually pursue post-graduate training while still a co-op student.

--An advisory committee should be formed to give direction and support.

b. To offer quality vocational education, is it necessary to have the latest equipment? The answer depends upon the vocational area. For example, in automotive areas it is not necessary to have the latest and most expensive wheel alignment troubleshooting scopes (e.g., Sun or Snap-on equipment) because entry level jobs are generally with service stations which do not have such equipment. The rule is simple. That equipment which is currently operated and maintained by entry level personnel and which the major employers use is generally all that is needed.

Most of the programs we studied had good equipment. However, physical plants were generally poor. It is felt that the latter is more important to teacher than to student morale. (Case Number 8).

c. We found team teaching and multi-media approaches to be effective in several programs (See Case Numbers 10, 14 and 19). It is almost mandatory to keep class sizes small with the disadvantaged. We found many programs with student/instructor ratios of 8 or 10 to 1. Small enrollments are also important (See Case Numbers 1, 2, 5, 25, and 10).

d. We found that programmed materials and work stations can be utilized to individualize instruction and to permit frequent intervals of access into programs by dropouts from regular programs (See Case Numbers 25 and 10).

e. Use of teacher aides was an important element in one or two programs. This technique does two things. First, the aide serves as a model for other students; second, it gives wide experience in verbalization and it reinforces what has been previously learned. (See Case Number 26).

f. In summary, the elements of success in vocational education and remediation cannot be identified as much in terms of results, as in willingness and ability to experiment and innovate. However, it is necessary to obtain and maintain information on effectiveness.

3. What school and community elements are important?

a. Climate - The climate of a program is the most important of all the model elements we identified. From this one variable stem all the others. Climate is determined, in part, by the traditional positive or negative "halo" the school has in the eyes of the community and the teaching staff. (Case Numbers 8, 13, and 35). One of the most important determiners of climate is the key person who makes the program go. We found that in every case of effectiveness, there was a single person who devoted all of his energies, time, and creative abilities. This person was in continuous, informal communication with staff, community employers, funding agencies, and students. Successful programs also build areas of flexibility into programs without sacrificing the firmness and structure that youth need and demand. This is best doen systematically and well in advance, and places the burden of responsible behavior on the students. (See Case Numbers 26, 8, 10 and 25).

b. Teacher Variables - Teachers trained to teach inner-city youth are a very important factor in childrens' success. It is better to use teachers with one or two years of teaching the disadvantaged in a regular program than either inexperienced or veteran teachers. Good teachers are those in their late 20's or early 30's, are youthful in outlook, can identify with the groups they are teaching, and are firm and do not allow students to take undue liberties. The best ways to attract teachers to teach in the inner-city are: provide small classes, allow them flexibility in curricula matters, and give them a monetary incentive. (See Case Numbers 2, 13, 14 and 26). (This finding is supported by the cases as well as research in general. See for example: Edmond W. Gordon and Doxey A. Wilkerson; Compensatory Education for the Disadvantaged; College Entrance Examination Board, 1966.)

c. Training Cycles - Training cycles should be designed in units which would permit entrance to and departure from training at frequent intervals during the cycle. For delinquents, they should also be designed, where possible, to coincide with release dates of inmates. For dropouts, they should permit frequent intervals of access into the program. (See Case Numbers 5 and 12).

d. Funding - Federal funds should be used whenever possible by schools or cooperating districts to develop effective programs. Case Numbers 29, 30, 31 and 37 report that the use of federal funds enabled them to plan and execute their programs. However, it is possible to accomplish a great deal with limited resources as was done in Case Number 14. Relative to grant-in-aid funds, there was a problem in obtaining introduction of exemplary vocational programs at the local level.

e. Community Elements - The role of community contact in total educational therapy cannot be over-emphasized. The most successful programs in this study all have community relations programs or advisory committees and experimental, community, and cultural enrichment components. Parental involvement can be useful. One program requires periodic home visits by teachers and counselors. The experience in one program can be emulated: The teacher coordinator "developed a parent advisory committee for the purpose of both advising the school on needs of individual students and for communicating with parents on the part of the school." (Case Numbers 3 and 10).

f. Placement - Placement activities are most effective when carried out by both the teaching staff and an employment counselor. We found that an involved staff will establish contact with employers over the years and alert them when a particular student uniquely fits job requirements. (Case Number 35 with a 100% placement rate).

g. Standards - The best programs do not compromise the curricula, reduce quality or teach down to disadvantaged students because of assumptions about student ability. Rather, these programs stress creative teaching, social services, student motivation and achievement at each students' maximum level.

h. Measurement of Achievement - There appears to be a positive connection between the extent to which a program measures its success and its actual success. Case Number 14 for Rural Youth and Case Number 11 for the retarded are good illustrations of effective programs. Achievement and related data should be maintained in a standard pre and post-design using the same test.

i. Follow-up - Follow-up programs perform two functions. They establish a close relationship between employers and the school, and they enable schools to evaluate learning outcomes. Case Number 9 for inner-city youth is an example of what can and cannot be done.

j. Recruitment - Successful programs have had to develop public relations techniques to overcome the resistance of parents and students. For a discussion of this problem see Case Numbers 8, 11, and 6. Students, parents and the cooperating employer groups appear to be the best targets for recruitment.

4. What supporting services are needed?

a. Residential or "total programs" could be considered for the most disadvantaged students, where community support is unavailable. Social, basic, and vocational education, food clothing, lodging, recreation, and medical treatment may be part of a total program such as that of Case Number 26. In the instance of a detrimental family or social environment, programs could provide for putting the mentally retarded individual in a special residential setting. In successful programs for the retarded, the student often becomes part of an atmosphere in which he feels understood and wanted and where his level of expectation is expressed and receives response. The program furnishes him with a sense of accomplishment which has some material expression in stipends, products which he can show his family, and a recognition that a future lies ahead for him. He, therefore, elects to belong and stay (See Case Numbers 4, 6, 8, 11 and 38).

b. Transportation is an important part of suburban and rural educational systems. Exemplary programs will include: reasonable bus routes that will enable students to get to school quickly, cooperative busing with neighboring districts to allow sharing of equipment and facilities for vocational education classes, and special "late" activities. Many students are eliminated from the activities of high school because they must promptly board buses after school. Students who do not feel a part of their school are more likely to drop out than students who are able to participate in sports and after-school events. Case Numbers 6 and 8 report that giving students the opportunity to participate in sports and other extra-curricular programs is one of the critical factors to the success of the program.

Programs for dropouts and potential dropouts, then, must include sports, social, school, or community activities that will attract the students and induce them, voluntarily, to participate.

c. Multi-agency services (especially social workers) are important adjuncts because these students tend to be multiply disadvantaged. The groups of disadvantaged who get the best supportive services are the functionally and mentally retarded. The reader is referred to Case Numbers 4, 6, 8, 11 and 38.

d. Continuing diagnosis and counseling are effective elements in all programs. A good example of what happens when you initially give students intensive guidance and diagnostic service and then decrease it is evident in Case Number 13.

e. Successful programs use a series of awards and certificates to build a sense of pride and individual accomplishment.

5. What are the priorities in implementing a program?

We place the greatest importance on school and community elements, because in every case these variables determined whether students accepted or rejected a program. Therefore, in planning a program, it is necessary to identify and mold these elements. The critical problem is recruitment of the key man and his staff.

Next in importance is the determination of what to teach and how to teach it. Here the important consideration is the relative weight given to academic and vocational studies in the context of the career offerings.

Finally, in the areas of supporting services, continuous diagnosis and counseling and multi-agency support are required.

C. CASE STUDIES

A total of 30 programs/cases are presented here. They are distributed among the five categories of programs studied as follows:

	Program Category	Number of Programs/Cases
I.	Dropouts/Potential Dropouts (Large Inner-City/Suburban)	16
II.	Dropouts/Potential Dropouts (Rural and Small City/Suburban)	6
III.	Mental and/or Functionally Retarded	5
IV.	Delinquents	2
V.	Non-English Speaking Minorities	1
	TOTAL	30

In each category, the programs are not arranged in terms of overall quality. They are arranged sequentially; e.g., Program Category I contains Cases 1, 3, 7, etc.

The extent of the treatment is a function of the exemplary features, program complexity, and available data. The case numbers are the same numbers that are used to identify the programs throughout this report.

Each case study is organized into eight sections plus a "Summary Data Chart" as follows:

A. General Description
B. Student Characteristics
C. Faculty and Staff
D. Curriculum and Scheduling
E. Administration and Funding
F. Impact of Program
G. Qualitative Impressions
H. Recommendations
Summary Data Chart

Section A (General Description), is an overview of the program and includes the program's objectives. Sections B (Student Characteristics), C (Faculty and Staff), D (Curriculum and Scheduling), and E (Administration and Funding) present the factual data provided through questionnaires, telephone queries, literature, and site visits for these various areas in the program studied. Section F (Impact of Program) discusses whether or not a program is meeting the stated objectives. Section G (Qualitative Impressions) gives our opinions of the program. Section H (Recommendations) contains our recommendations, as well as those of the program staff. For a quick analysis of each program, the reader is encouraged to place emphasis on Sections A, F, G, H, and the Summary Data Chart. In the "Summary Data Chart," definitions of the headings are as follows:

I. PROGRAM AND STUDENT CHARACTERISTICS SECTION

1. Location: the geographic location of the project--Northeast, Midwest, South, Southwest, and West; and the six area locations in terms of population: Large City (over 100,000); Inner-City; Large City Suburban (over 100,000); Small City (less than 100,000): City-Suburban; and Rural.

2. Type: the type of program offered by the school or schools studied in that particular case, such as distributive education, work study, pre-vocational, vocational education, etc.

3. Kind of School: the type of school in which the program is located, such as comprehensive junior high; comprehensive high school; vocational school; mentally retarded; etc.

4. Age of Program: the length of time the program has been in existence which will vary and may not be an exact figure in terms of number of years, months, etc.

5. Enrollment: Enrollment figures include the total number of students enrolled in the program and the per cent of males and females.

6. Average Age and Grade: the average age of students enrolled in the program and the grades served by the program. In the event there is more than one grade served, the average age is given as an age range corresponding with the grade range which is served.

7. Race/Ethnic: the percentage of students enrolled in the program by race and/or ethnic group.

8. Average Academic Retardation: the average number of years of academic retardation of the students enrolled in the program.

9. Family Income Under $3,000: the per cent of students enrolled in the program who come from families in which family income falls under the poverty guidelines established by the U.S. Office of Economic Opportunity and the U. S. Office of Education, Title I (ESEA), of $3,000.

10. Primary Occupation of Heads of Household: the principal occupation of the majority of the students' parents.

II. INSTRUCTIONAL DATA SECTION

1. Class Size: the average class size.

2. S/I Ratio: the student/instructor ratio in both the vocational classes and the basic education classes in the case studied.

3. Diploma/Certificate: the type of diploma and/or certificate which is awarded to the student upon completion of the program in the case studied.

4. Number of Vocational Offerings: the number of types of vocational courses which are offered in the programs studied in this case.

III. TEST DATA SECTION

This section summarizes the available data on reading and arithmetic achievement. It also includes testing which was administered by SERD.

IV. DROPOUT/FOLLOW-UP DATA SECTION

1. Dropout Rate: When available, the dropout rate is provided for the entire school system, for the school studied here prior to the program, and the 1967-68 data for this program.

2. Follow-Up Data: When available, data on placement and follow-up of graduates is indicated in this section.

V. COST DATA SECTION

1. Annual Cost/Student: the annual cost per student in the program.

2. Cost/Student Hour: the cost per student hour for the program studied.

3. Average Annual Starting Salary for Vocational Teachers: the average annual starting wages paid to the vocational teachers in the program.

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PROGRAM CATEGORY I: DROPOUTS/POTENTIAL DROPOUTS (LARGE INNER-CITY/SUBURBAN)

CASE NUMBER 1

A. General Description

Case Number 1 is a study of a youth education center which is part of a bi-county program organized in October 1964. Since that time, this program has provided out-of-school youth, age 16 to 25, an opportunity to complete their high school education and/or obtain an employable skill.

Shortly after opening, center officials realized that vocational skills alone were not enough to assure its graduates meaningful employment. Therefore, the primary objectives were two-fold: vocational development and academic development leading to a high school diploma or a General Equivalency Development Certificate. This approach has proven successful and is highly regarded by both students and employers.

The community served by the Center is urban and suburban.

B. Student Characteristics

At any given time, the enrollment is about 650, equally divided between girls and boys. During the school year, the program will serve approximately 1,300 persons. As discussed later, this stems from a completely unrestricted policy regarding entrance and attendance.

The students are one-third Negroes, one-third Spanish-speaking, one-third Anglo, with about 1% American Indians.

Approximately one-half the students come from public assistance families, and the other half are enrolled in the Neighborhood Youth Corps. NYC students are compelled to attend school as part of their program. Attendance is not compulsory for the others.

Admission is on an individual basis. Minimum requirements are: six months out of school or a recommendation from the last school attended. These regulations are flexible, and efforts are made to admit anyone who would benefit. Past altercations with civil, legal, or school authorities, pregnancy, etc., do not pose a barrier to admission. Occasionally, extremely disruptive students are removed, but our impression is that the tolerance level of Center officials is high.

Normative achievement data is not available. The Center claims a preference of working with an individual rather than an "average". The students are placed on the basis of past high school performance, which is based on objective data (grades, test scores, etc.).

C. Faculty and Staff

The academic and vocational teachers in this program have at least two to three years experience in regular programs and are state certified (BA degree, plus education courses for academic teachers and five years of trade experience for vocational instructors). The Principal generally selects the academic teachers and the head of vocational instruction selects the vocational instructors. Teachers are screened during their selection interviews on whether they are interested in the students and on ability to build rapport. Teachers must work with students rather than subject matter. One teacher was dismissed last year because of a failure on these counts.

Teachers are not given special training by the school. However, they are encouraged to, and actually do, attend university sponsored courses, seminars, and workshops. the principal does not believe in numerous, formal teachers' meetings, but prefers to work individually with each teacher.

One of the critical factors in obtaining and retaining teachers is the compensation provisions. Teachers are paid on a standard, city-wide basis ($6,600 per year). However, they are paid on an hourly rate and given a generous overtime allowance, plus they can work all year. Thus, a teacher may earn between $8,000 and $9,000 a year.

D. Curriculum and Scheduling

Vocational training is geared to entry level jobs. Offerings are limited to business education (typing, bookkeeping, etc.) offered up to 4 years; automotive offered 1 year; welding offered for 6 months to 1 year; and small engine repair offered for 1 semester. A machine shop course offered at night generally attracts older students.

With regard to objectives, students can earn a high school equivalency diploma or complete sufficient credits to return to a regular program and receive a high school diploma. Last year only 5% returned to the regular program to receive a diploma.

With regard to innovation, the program tried team teaching, but found it unnecessary. Here, small class size was the answer to effective teaching. Student instructor ratios are 8 to 1 for vocational, and 10 to 1 for academic courses.

The program characterizes itself as being highly flexible, i.e., students can enter and leave at any time; there are no bells to send students to class, etc. The administration is sufficiently flexible to permit the academic students to enroll in some vocational courses, while other students enroll only in the vocational courses. Coordination between academic and vocational offerings is accomplished on an informal and individual basis. Students come to the program from an almost infinite variety of high school achievement levels. In the usual case, placement is based on past school records, interviews, and observational data of individual teachers. On occasion, the Iowa Achievement Test is used to determine the student academic performance level.

The staff attempts to keep the vocational curricula from being watered down. However, the changing faces in a classroom necessitate alterations in content and scheduling. An illustration of this in automation instruction for a hypothetical student follows: The student could enter at the end of the second month of the new school year. The instructor is in the third day of electrical systems using Delco charts or illustrations from Crouse; he will now have to stop and repeat to the new student the materials previously covered and hope for the best.

E. Administration

While the Youth Education Center is part of the City Public School system, two counties have an arrangement for sharing the cost of operating the two Centers, based on enrollment and attendance. Cost per student data was not available.

The program receives ESEA Title I funds in addition to State and local funds. The school is headed by a Director whose function is similar to that of the principal at a typical high school.

F. Impact of the Program

The strongest characteristics of the Center are flexible scheduling and the curriculum. The fact that students may register for as few or as many courses as they wish and may attend as long as they feel they are benefiting, tends to encourage students to enroll. The small class size allows the teachers to gear the program closely to individual needs. However, with flexible policies, you need flexible curricula and teaching techniques.

The vocational program is separate from the academic program and coordination between the two programs is informal and unplanned. We found no evidence that vocational education is used as a method of teaching academic sugjects. The vocational training offered is of a highly structured and sequenced nature. It may be adequate but it has not benefited from recent experiments and developments in flexible programming in vocational education. All of the students, except those from the Neighborhood Youth Corps, have enrolled voluntarily and it can be assumed that they are motivated to participate in the program. The program began as an attempt to meet many of the objections raised to regular high school. It presents an informal, relaxed atmosphere almost devoid of rules and regulations.

Its attendance policy is the most lenient observed. A student may attend a few days, absent himself for several months, and return with no questions asked. In this way, no one is considered a dropout.

G. Qualitative Impressions

The admission of any student who applies; the lenient attendance policy; and the acceptance of pregnancy, criminal records, or school expulsion without hesitation, strongly suggest that this program serves the disadvantaged student. Whether such students, once admitted, are adequately served by the vocational training offered is open to question. The choice of vocational curricula is limited. The methods of teaching are, for the most part, unimaginative. There is no use of multi-media approaches, programmed learning, etc.

With a school policy which virtually eliminates the requirement of attendance, it is impossible to assess the retentive strength of the program. Records which might provide some measurement are not available.

There is no regular testing procedure in this program, and consequently, testing data is not available. There is no regular follow-up procedure for job placement and, obviously, for job retention. Some individual teachers do assist in placement, and follow up on students in whom they are interested. This information is too sketchy to permit even a tentative estimate of achievement for the program.

We commend the program for its open policies of admission and flexibility of rules and regulations. These are the most significant factors. Without adequate follow-up, however, it is difficult to determine whether these factors contribute to achievement or behavioral change. As previously suggested, these policies may well have come about as a reaction to criticism of the traditional school program.

It would also seem that the kind of flexibility which has been directed at admission and attendance should now be directed toward the curriculum and teaching method. If the same open-mindedness is applied, the program could be substantially improved.

H. Comments

The program should consider the creation of an administrative structure which will facilitate the coordination of the academic and vocational programs and create planned opportunities for interchange between the two segments.

Another recommendation is that vocational curricula and instructional material be reviewed to determine appropriate ways and means of sequencing youth who may enroll at any time into the program without disruption of ongoing instruction. Work stations, teacher aides, and programmed materials would help. Coincidentally, the academic course content should be reviewed with the objective of creating "interest centered" learning experiences related to the vocational training.

Above all, a proper evaluation and data collection scheme is mandatory.

A brief chart summarizing the data obtained and specific characteristics of Case Number 1 follows.

SUMMARY DATA: CASE NUMBER 1

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Western City Suburban
2. Type: Special Needs; Vocational Education
3. Kind of School: Full vocational education
4. Age of Program: over 2 years
5. Enrollment: 855; Males 50 % Females 50 %
6. Average Age: 16-19 Grades 9-12
7. Race/Ethnic: White 33 % Negro 33 % Spanish American 33 % Other 1 %
8. Average Academic Retardation: 1 year
9. Family Income Under $3,000: 50+ %
10. Primary Occupation of Heads of Household: Blue Collar; Service

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 10-12 Basic Education 10-12
2. S/I Ratio: Vocational 8/1 Basic Education 10/1
3. Diploma/Certificate: General Equivalency Diploma; Youth return to their regular high school for diploma.
4. Number of Vocational Offerings: 5

III. TEST DATA

Not available.

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 _____% Prior to Program _____% Regular School ____%
2. Follow-Up Data:

5% return to regular high school.

V. COST DATA

1. Annual Cost/Student: $_______ 2. Cost/Student Hour: __________
3. Average Annual Starting Salary for Vocational Teachers: $6,600.

CASE NUMBER 3

Case Number 3 is a partnership of public schools and industry to gear vocational training to the job market and assure jobs to those completing the program.

A. General Description

The program is located in one of America's major cities, considered to be among the most progressive in its programs to solve urban problems. This city has been cited for its outstanding anti-poverty program which featured the close cooperation and coordination of the city administration and the board of education. Its Mayor has been the subject of numerous articles in national magazines. Consequently, there was unbelievable shock when, in the summer of 1967, the city attracted national attention for the duration, and destruction of its "riot."

The leading citizens tried to pick up the pieces and undertook a critical self-analysis to find the causes and solutions for this angry outbreak. One effort was the organization of a committee of key people in the community including business, labor, government, educational, and minority group leaders who would stimulate and develop new programs.

One apparent discovery of this committee was the critical condition of public education; in particular, the almost complete lack of meaningful vocational education.

For example, one high school enrolled 100% Negroes, with about 30% going on to college after graduation. This was a creditable performance when taken by itself, despite the fact that the national average is better than 50%. However, the remaining 70% were ill-prepared for any kind of employment. The vocational program consisted entirely of obsolete shop courses (wood and metal) for the boys, and clerical courses (typing and shorthand) for the girls. The physical plant was outmoded and the equipment obsolete.

As a truly imaginative undertaking, a major manufacturer proposed to adopt this high school. The plan was to bring the resources of the corporation to bear on the many problems of the youth.

Following this proposal, a steering committee was formed of corporate executives and school officials to develop a list of objectives and recommendations as follows:

1. Make available for consultation and advice, appropriate specialists to work with high school faculty and advise on curriculum content. This could involve such areas as chemistry, physics, mathematics, auto mechanics, metal shop, drafting, typing, etc.

2. Make the fullest possible use of the high school co-op students enrolled in typing, filing, auto mechanics, etc., in providing modest work experience wherever vacancies in the corporation could be converted into co-op placement opportunities.

3. Maintain a company-based Interviewing Employment Service at the school to:

    a. Interview and place recent unemployed graduates of the school or refer them to employers.

    b. Provide "in-house" experience and guidance for students to learn to cope with application forms, tests, interview procedures, etc., required for job placement upon graduation.

    c. Make available a continuing source of information on job availability and requirements for counselors, teachers, and students.

4. Recruit about 200 volunteer supervisory and professional personnel who would donate one hour per week to counsel students designated as potential dropouts concerning the realities of the world of work and the values of good education and dependable work habits. This would pre-suppose one or two sessions with volunteers from the corporation to discuss counseling techniques and close coordination with the school administration.

5. Provide company personnel as guest lecturers before student groups. This could run the gamut from a research engineer lecturing on applications of new technology before classes in chemistry and physics to a current corporation apprentice talking to a male student group about the qualifications for and broad range of opportunity in automotive skilled trades.

6. While opportunities for summer work experience are restricted by law in machine shop type jobs, a limited number of work training type experiences would be made available. They would include:

    a. Two six-week sessions (25 students per session) on auto mechanics for students between the junior and senior years.

    b. Two coaching sessions for interested youths to assist them in passing apprenticeship qualifying tests. This approach aims at increasing the number of youth who could qualify for an apprentice training program in conjunction with a junior college in the area, and would enable the student to earn 47 of the 60 credits needed to complete the junior college associate degree program. Beyond that, the corporation's Tuition Refund Plan would finance any additional college course work leading to a degree in a job related field of study. Opportunities for in-service training and the tuition refund provisions would be available to girls as well as boys who became corporation employees.

7. Donate specialized equipment to the school to support the teaching programs.

8. Make available company representatives to work cooperatively with the school faculty and administration in the testing and application of new teaching techniques.

The program began in January 1968, but will not be in full operation until the 1968-69 school year.

B. Student Characteristics

The school is located in the inner-city in a Negro residential section. In a determined attempt to provide employment for graduates of the school, industry conducted job interviews at the school location. Only one student was found to be qualified for employment in a clerical position. No students were found to be qualified in manufacturing. This was not a case of high job entry qualifications because industry waived many of its qualifications. At the same time, the school administration conceded that the school's performance was "terrible." The female students were so poorly prepared in spelling and grammar that they could not perform at a minimal level in typing and shorthand.

As might be predicted, the low level of preparation and performance had seriously affected the self-confidence and aspirations of the youth. They were listless and disinterested.

C. Faculty and Staff

The program is under the overall direction of the principal at the high school, a dynamic, young Negro. A Negro executive has been assigned almost full-time to coordinate the company's participation. The faculty will be drawn from the existing staff at the school. A profile of the vocational and academic staff members indicates (even though full data was unavailable at the time of this report) that the staff will have had between five and ten years of instructional experience with many working on advanced degrees, they will be eager to cooperate and receptive to suggestions and comments from the industry representative and they will have a good orientation to the program before it starts.

One exciting element already underway is the employment of teachers by the company during the summer (1968). These teachers have been assigned duties at the manufacturing plant which are directly related to the kinds of jobs which the vocational program will be geared to fill. In this way, they can make first-hand observations about the nature of the work which the students will be asked to perform. In addition, the company has made consultants available to the faculty to help them prepare curricula which is relevant to present industry needs.

D. Curriculum and Scheduling

The vocational program is not scheduled for implementation until the fall semester of 1968. At this writing, the precise curriculum and materials were unavailable. We can, however, make some predictions on the basis of the activities to date. As mentioned earlier, the company has assigned consultants to work with the faculty in developing the curriculum. This is a delicate matter, but all persons involved appear to be cooperating.

A summer work experience program for 90 youth is presently underway. This program is of six weeks duration and of the work-study variety: one-half day in classroom and one-half day at work. The classroom provides basic instruction in language arts, mathematics, and basic automobile shop. The materials used are keyed to reading level requirements of automotive manuals. The vocational materials are keyed to first-line maintenance problems encountered in service stations, e.g., minor tune-ups, use of tools, automotive systems (electrical, fuel, suspension), etc. The work experience provides an opportunity for the youth to work alongside regular employees. An informal "buddy" system has been created with the regular employee in a coaching position which provides an opportunity for the youth to compare his own performance with that of regular workers.

The company has gone far beyond the technical terms of the agreement; it has renovated quarters in the high school and provided all new equipment for the auto shop courses. This fall, the company intends to install data processing equipment.

E. Administration

This program is part of the regular program in a major school system. The preparations for the program have benefited from the energy and insight of the newly appointed Negro principal. At this point, it is carried on largely by the personal interest and enthusiasm of those involved. It is too early to say whether this will be sufficient when the program actually gets underway and is beset by the difficulties and disappointments which are sure to come. While some school officials are aware of potential administrative problems, we were unable to learn of any planned modification or re-structuring of organization.

F. Impact of Program

The impact of the program, in terms of actual benefits to individual students, is not known because the formal program will not actually begin until the fall of 1968. Nevertheless, the "promise" of the program has had an impact. It is evident in the enrollment of students, in the interest of the involved officials, and in the physical changes and improved equipment which have resulted from industry's participation.

The pre-apprenticeship program is underway this summer with 58 students enrolled. This program is intended to acclimate the students to the job application process by means of experience with forms, tests, and interviews. At this writing, the program is still in progress and, consequently, there is no data available to suggest its effectiveness.

G. Qualitative Impressions

This program is designed for a truly disadvantaged population. In our survey, we found no tendency to equivocate about this goal and, thus, anticipate the program will continue to pursue this objective. However, there is a subtle influence which may affect the range of alternatives available to the disadvantaged. The corporation involved is one of the leaders in the auto industry. The emphasis has been on training in this industry. This may lead to the neglect of other occupations.

Since the program is still in its formative stage, there are no data available regarding the ability of this program to interest and retain students who would otherwise leave school.

Similarly, inasmuch as the formal program has not yet begun, there are no data available for student assessment.

It is well to recall that this program received its impetus from a riot in 1967. As may be anticipated, as the crisis of that time recedes in memory, enthusiasm and energy diminishes. It was thought, at the inception of the program, that substantial numbers of technical and supervisory personnel of the corporation would participate on a voluntary basis. This has not happened. The corporation representatives who are assigned continue to devote great energy to the program. However, they appear to have found that the problems are much more complex than originally contemplated, and remedies are likely to require programs of long duration.

These observations are not intended to disparage the program in any way. It is certainly an exciting experiment with the involvement of industry and gives promise of many benefits.

H. Comments

Education and industry in Case Number 3 have embarked upon a most interesting experiment. It would be unjust to attempt recommendations at this time when the program is in its formative stage. We do, however, make recommendations for further study and evaluation at the conclusion of the first semester in January 1969. This study should pay particular attention to:

a. The actual assurance of employment for those students who complete the program.

b. The arrangements by the employer for follow-up support for those persons employed.

c. Modification of curriculum.

d. The ability of the school to develop flexible administrative arrangements.

e. Reduction in dropout rates and increments in academic and vocational achievement.

Since this program is not operational, a Summary Data Chart is not included for this program.

CASE NUMBER 7

A. General Description

This program stems from a reorganization of vocational education in the school system of a mid-Atlantic city. This reorganization aimed at "ending the separation of vocational schools and curricula from the general academic program and, attempting to provide flexibility and adaptability...for current industrial needs."

The metropolitan area ranks in the top 10 in the Nation, with a 1960 population of close to 2.5 million. The central city is among the largest 20 in the United States with a 1960 population somewhat over 600,000. While the city's total population declined 10.7% from 1950 to 1960, the decline for the 20-29 age group--the highly productive and employable years--was over 38%. Recognizing this disturbing fact and the obvious relationships between the city public school system and the industrial-business and other socio-economic forces in the metropolitan area, the school board in 1962 authorized a comprehensive vocational education survey, including a review of the local industrial economy of the city, of metropolitan manpower needs, of the existing vocational offerings, and of student-parent opinions. Thus, the survey (published in April) provided the rationale and impetus for the restructuring of vocational education. The climate for the changes recommended was enhanced by the adoption that same year of the Vocational Education Act of 1963, providing increased financial support from both state and federal sources for the local vocational education program.

Three important realities were identified by this 1963 Report: First, only 28% of the high school graduates were going on to college, yet more than 70% were enrolled in either academic or general programs. Secondly, the work patterns and demands of the metropolitan area had changed radically from those of a steel, transportation, and mining center to, increasingly, those of new industries to which existing vocational-technical training programs were inadequately related. Thus, 109 job titles important to the emerging economy of the local community were identified in the Report; this list has since been expanded to 120, with the continued growth of medical centers in the area.

At the time the vocational survey was undertaken, the city school system was operating five traditional vocational high schools. Course offerings were limited to 23 trades and less than 13% of the students at the high school level were enrolled in these programs. The average age of the shop equipment was 37 years and no systematic review or up-grading of the vocational program had been made for nearly 20 years.

Early in 1964, the city school board began implementation of the recommendations in the 1963 Report. It provided for (1) the development of three central "core" curricula, represented by the occupational, vocational, and technical (OVT) combinations of academic and non-academic subject matter; (2) the undertaking of an orderly transition from the traditional vocational schools to comprehensive high schools with program offerings, usually limited to the eleventh and twelfth grades; and (3) the further development of technical level instruction to be given in the thirteenth and fourteenth grades.

Current with this renewed interest in vocational education, other areas of the total school curriculum were being examined with a view toward upgrading. A grant of $2,485,000 was received from the Ford Foundation, of which $102,800 was designated for this program.

Since the central objective of the plan was to make the programs available to the bulk of non-college-bound students, i.e., over 70% of the high school enrollment, it was obvious that many programs must be moved into the academic high schools. Heretofore, offerings in the two types of high schools --academic and vocational--were separate and distinct, patterns of organization were different, and courses with similar titles often were different. The two types of education were not mutually exclusive, but could be combined into a comprehensive program. The five technical schools were, therefore, either merged with one of the academic high schools or, in two cases, phased out.

During the 1967-68 school year, 58 occupational, vocational, and technical programs were in operation scattered throughout the 16 comprehensive high schools of the city. Enrollment figures for that year indicated that approximately 60% of the eleventh and twelfth graders were enrolled in these programs.

B. Student Characteristics

The discussion of the OVT program (hereafter, simply called "the program") to this point was focused on its city-wide operation. From this point, observations in this study relate to the program as it operates in one of the comprehensive high schools of the city. This school is adjudged representative of the city-wide vocational program operating in the inner-city, low income area and serving disadvantaged Negro youth.

The total enrollment in this one secondary program for the 1967-68 school year was 855 students from grades 9 through 12. A total of 182 students with an average age of 15 were enrolled in grade 9, 207 with an average age of 16 in grade 10, 299 with an average age of 17 in grade 11, and 167 students with an average age of 18 in grade 12. The average academic retardation was one year. About 85%-99% of these enrollees were Negro, and one out of five of them came from families whose annual income was less than $3,000 a year. The primary occupation of parents was blue collar work. Most students fell in the I.Q. range of 75 to 90, but all intelligence ranges were represented. Many came from broken homes or from homes which were emotionally, economically, or culturally disadvantaged and inadequate. The behavioral patterns commonly found among inner-city Negro slum dwellers were apparent: truancy, delinquency, hostility, alienation, etc.

C. Faculty and Staff

The program has three levels of instruction, at the occupational level and at higher levels of vocational and technical education. This provides for and permits more effective utilization of instructional personnel than is possible in a vocational school. Industrial arts teachers are used at beginning levels and for instruction not within the traditional or conventional subject matter areas. Vocational teachers and other personnel with trade competencies are utilized to instruct at the advanced levels. With a common shortage of personnel having the necessary years of trade experience, provision has been made for up-grading industrial arts teachers to enable them to offer skill programs at higher levels. This up-grading has been attempted through in-service training programs that have become more standardized and mature as the program has developed.

Use has been and is being made of grants under the Vocational Educational Act of 1963 and Title I of the Elementary and Secondary Education Act of 1963, for research, experimental curriculum development, and in-service training programs in the field of vocational education.

To prepare the teachers in this program for broader needs and implications, a re-orientation of teachers and counselors was conducted during the summer of the 1966-67 school year. This in-service training is now offered on a continuing basis.

Faculty course loads seem larger than optimal. The typical vocational class had 25 students in the 1967-68 school year, and the typical basic educational class included 30 to 35 enrollees.

The staff, including most senior positions, is predominently white. The average age and experience of existing and newly hired staff (except in senior positions) tends to be low. Too many of the teachers view their jobs and the students they serve apart from the mainstream of their lives. There are no distinguishing characteristics between these teachers and those that might be selected for a national sampling from a typical large city school. The starting salary for program teachers is $5,900, with progressively higher salaries for teachers at the advanced levels.

D. Curriculum and Scheduling

The program has 10 distinguishable features:

1. As has been emphasized earlier, the comprehensive high school, rather than separate academic and vocational institutions, constitutes the organizational arrangement of the program.

2. The four-year program is articulated with the middle-school curriculum; i.e., for grades 6, 7, and 8. This middle-school curriculum includes exploratory career survey programs required of all pupils.

3. Ninth and tenth grade industrial arts, business education, and home economics programs are offered, exploratory in nature, but in more depth to encourage and permit students to make a more informed and intelligent career selection by the eleventh grade.

4. Job-centered training is reserved for the eleventh and twelfth grades.

5. Where certain skills require more training than can be provided in the eleventh and twelfth grades, skill-centered programs are extended through the thirteenth and fourteenth grades. Presently, 13 programs offer training at the post-high school level.

6. Where appropriate, cooperative and work experience programs have become an integral part of the program.

7. Readily identifiable potential dropouts are admitted to skill-centered programs at age 16, irrespective of the grade level of the student.

8. All programs lead to expected high school graduation.

9. Entrance requirements are minimal, if not non-existent. Students are enrolled in a program of their expressed interest, and "spin-off" levels are established whereby a student may specialize in certain areas of a skill within a generic occupational area. For example, in the automotive field, there are at least six levels: Service Station Attendant, Automotive Mechanic, Automotive Machinist, Automatic Transmission Technology, Carburetor-Ignition Technology, and Diesel Technology.

10. The school day has been extended from seven to nine periods to enable better use of physical facilities and to allow more flexibility in the scheduling of students. This extended day makes it possible for any student to pursue two goals; i.e., an academic diploma and a "salable" vocational skill.

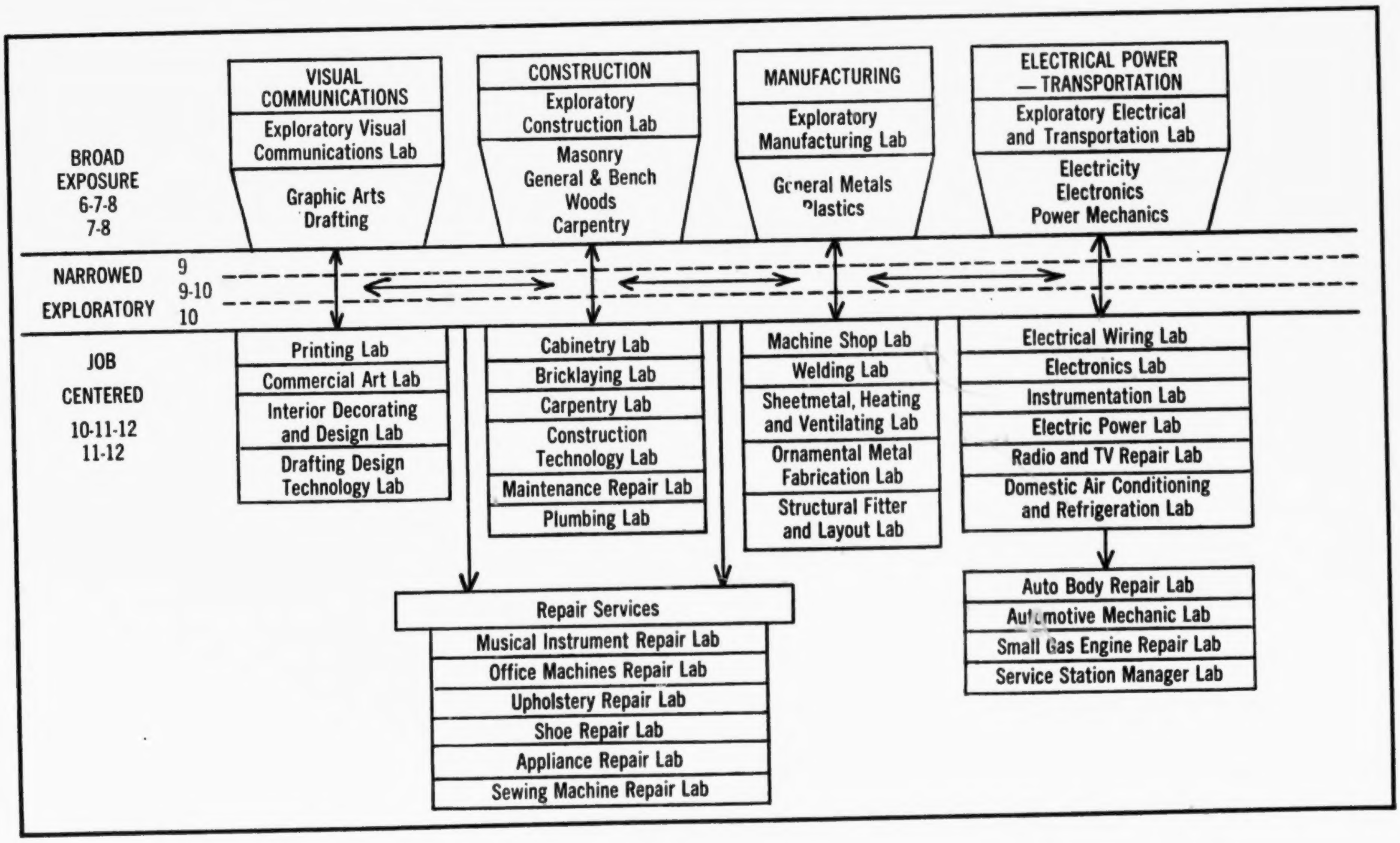
The program for the typical student completing the vocational curriculum is to have exploratory career information presented to him during the middle-school years, and then to be enrolled in industrial arts, business education, or home economics courses during the ninth and tenth years. Upon entry to the eleventh grade and after a period of testing and counseling, the student is encouraged to select a broad industrial classification, with skill training available at progressively higher levels of the occupational, vocational, technical, or post-high school programs. The occupational programs are designed to be two years in length and to achieve two objectives: First, they serve as entry programs where student interest can be advanced, motivation instilled, confidence gained, and aspiration levels raised both vocationally and academically. At the same time, they serve as skill development programs, in semi-skilled and service areas where the education is not as demanding as in vocational or other academic areas. Vertical scheduling enables students to move to more advanced or different experiences as they become interested and ready.

A general education phase accompanies the skill training in the occupational program. Reading classes using unconventional materials, are used to capture the student's attention. Students are encouraged to read whatever they are interested in, whether it be in their occupational area or in other areas of interest, which, for many teenagers, are clothing styles, hot-rod cars, sports stars, or outer space. This reading class and the remainder of the school day after three periods of skill training experience, is devoted to improving dormant academic abilities of the student. This program continues on a half-day basis when a cooperative work experience is begun.

The Curriculum Director of the program has outlined the central objectives of the curriculum as follows:

> The school can reach the pupil and aid in his discovery of specific abilities needed for his individual success by: (1) the combined efforts of occupational experiences in the laboratory and on the job; (2) general courses to extend and improve his educational background; and (3) related courses which stress social adjustment in attitudes. The scope of each occupational program is intended to be as broad as the range of industrial materials, as deep and varied as the intellectual processes, and as personal as are individual differences among the students.

While all the possible offerings are not available at this particular school in the program, the following overview chart offers insights into the structure and range of the curricula in the city-wide program.[8]



BROAD EXPOSURE 6-7-8 7-8
NARROWED EXPLORATORY 9 9-10 10
JOB CENTERED 10-11-12 11-12
VISUAL COMMUNICATIONS
Exploratory Visual Communications Lab
Graphic Arts
Drafting
CONSTRUCTION
Exploratory Construction Lab
Masonry
General & Bench Woods
Carpentry
MANUFACTURING
Exploratory Manufacturing Lab
General Metals
Plastics
ELECTRICAL POWER — TRANSPORTATION
Exploratory Electrical and Transportation Lab
Electricity
Electronics
Power Mechanics
Printing Lab
Commercial Art Lab
Interior Decorating and Design Lab
Drafting Design Technology Lab
Cabinetry Lab
Bricklaying Lab
Carpentry Lab
Construction Technology Lab
Maintenance Repair Lab
Plumbing Lab
Machine Shop Lab
Welding Lab
Sheetmetal, Heating and Ventilating Lab
Ornamental Metal Fabrication Lab
Structural Fitter and Layout Lab
Electrical Wiring Lab
Electronics Lab
Instrumentation Lab
Electric Power Lab
Radio and TV Repair Lab
Domestic Air Conditioning and Refrigeration Lab
Repair Services
Musical Instrument Repair Lab
Office Machines Repair Lab
Upholstery Repair Lab
Shoe Repair Lab
Appliance Repair Lab
Sewing Machine Repair Lab
Auto Body Repair Lab
Automotive Mechanic Lab
Small Gas Engine Repair Lab
Service Station Manager Lab

E. Administration

The program is under the supervision of an assistant superintendent for Occupational, Vocational, and Technical Education for the entire school system. In the high school described here, staff members are part of the faculty of the comprehensive high school and are directed by the school superintendent.

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[8] From Rockwell Power Tool Instructor; Vol. 15, No. 1; 1966, page 4.

The supportive services of this high school; e.g., counseling, testing, health services, etc., are made available to students on the same basis as other school enrollees. A curriculum director is responsible for curriculum development and improvement throughout the city school system .

The program is funded from local school district funds, supplemented by the special grants from the Ford Foundation, the Vocational Education Act, and Elementary and Secondary Education Act, as noted earlier. The estimated annual cost of the program per student for the 1966-67 school year was $600.

F. Impact of the Program

Following the success of the citizens advisory committee which accomplished the 1962-63 vocational survey, the school system established three levels of advisory committees to meet regularly with staff members to counsel them as to the relevance and adequacy of course content, equipment, teaching methods, etc. An over-all Policy Advisory Committee was appointed in September 1964; two second-level Health Occupations and Technical Committees were established in March of 1965. And, presently, more than 600 citizens are serving as advisory committee members on the various craft committees, at the third level of this committee structure.

The rationale and objectives of the advisory committees are sound, but in the high school described here, the relationships of the predominately white administration and faculty with the predominately black community and black program enrollees appears to be poor. In the spring of 1968, a week-long strike, accompanied by some minor violence, was held by a number of black students. They demanded more Negro teachers and supervisory personnel and courses in Negro history. These two demands were met substantially by the administration, and there was an improvement in student morale. However, it remains to be seen whether this improved student morale and better student-faculty relations will be maintained over a longer period. There seems to be a tenor of hostility and violence among students at the school.

The general model for the vocational-technical education of disadvantaged students, as described above, appears promising. Unlike many other inner-city schools with a black student body, quality mass education is attempted here, with the same program offerings as at all of the other secondary schools in the city. This school should certainly not be characterized as a dumping ground for disadvantaged pupils. Instead, it offers educational opportunities to a large number of the disadvantaged who are willing to make minimal adjustments and effort. We found an increasing number of college-bound students in vocational courses on an extended day basis. However, it appears that, for the highly disadvantaged and alienated student, not a great deal is being done to retain or reclaim him. The dropout rate is quite high for the four years of this secondary school program. In recent years, the dropout rate has been more than twice that for the school system generally; i.e., 20% as compared with 8.5%. However, it appears that the program in the eleventh and twelfth grades has contributed to the holding power of the school. For example, the dropout rate for seniors enrolled in the program during the 1967-68 school year was 4.4%, or about half that of the dropout rate for the city school system.

It is difficult to assess the placement record of the program in this school. For although complete and meaningful records are maintained on the enrollees as to health status, data on standardized tests, and progress through the curriculum, very little information relative to the placement of the program graduates is available. The school's employment counselor appears to be overworked, with a case load that does not permit him to develop and maintain placement data. However, the assistant superintendent for the program testified that "virtually all graduates are being placed".

Regarding achievement, students in this program are retarded about four grades. Reading and arithmetic scores for these students, when they were in the eighth grade were 7.1 and 7.5, respectively, on the Metropolitan Achievement Tests. In the twelfth grade, these students scored 7.7 and 6.6, in reading and arithmetic on the SAT.9/

A comparison was made of students who were initially placed in "high" and "low" skill vocations during the placement period. The "high" skill students in the eighth grade had a reading score of 7.2 while the "low" skill students in the same grade had a reading score of 6.9. For "high" and "low" skill students, the arithmetic scores in the eighth grade were 7.2 and 7.6, respectively. By the twelfth grade, reading scores for "high" and "low" skill students were 7.9 and 7.2, with the arithmetic scores at 6.7 and 6.5, respectively.

There is an amount of anecdotal evidence that the program has succeeded in accomplishing positive behavioral changes in the attitudes and actions of the program enrollees, as compared with the older vocational program. Teachers and guidance personnel testify to these improved behavior patterns. However, apparently there are still serious and frequent problem cases in the program and in the school. During the time that one of the observers of the program was in the principal's office, $200 was reported stolen from a teacher's desk; one teacher told of having been threatened physically by a student; another teacher came in to discuss a student who had just crashed a stolen car; and it was noted that, every five or ten minutes, teachers reported a variety of behavior problems of either a petty or serious nature.

G. Qualitative Impressions

Note has been made that the program, both in its design and operation, is an open one offering an opportunity to disadvantaged youngsters to obtain most adequate vocational-technical training. And since this particular school serves an inner-city, low income neighborhood, there is little question that a substantial portion of its enrollees are truly disadvantaged. This program does, in fact, serve the disadvantaged, partially, if not adequately. There appears to be a rise in the number of students entering the program each year. Apparently, the word is being spread that the program is good, even for the college-bound.

9/ This amount of retardation is suspect because of testing conditions. On a city-wide comparison basis, these students (when compared with all students in the school system) are approximately 1-2 grade levels retarded throughout high school.

However, the retention power of the program can be, and has been, faulted. This is one of its serious deficiencies, although in the eleventh and twelfth grades, it appears to be less vulnerable on this score than the entire school program. However, dropout rates of 20% over four years and 4.4% for senior enrollees in the 1967-68 school year are serious problems worth early attention and effective remedial action.

With regard to increments in achievement, the following appears to be relevant:

> On an overall basis, the students in this school appear to be progressing at a rate which is nearly equivalent to national standards; that is, the amount of retardation present is not more than one or two years. It is felt that with more and more students enrolled in the program--especially some of the college-bound students--and, with a better racial integration of the staff and better "school climate," normal academic progression can be attained.

This phase of the program is seriously deficient. Additional staff personnel and time should be invested in this area. For the absence of longitudinal placement analysis precludes useful feedback information for evaluation and improvement of the curriculum. Neither the relevance nor the effect of the existing program can be evaluated.

Further, there is no evidence that program staff members are used in a supportive fashion to aid in continued and successful adjustment of the program graduate to the active work world.

Here, an attempt will be made to assess, briefly, the program as it is operated in the inner-city school in this case study.

1. Academic Elements

One of the stronger features of the program is the fact that students can pursue pre-college and vocational skill goals simultaneously. Moreover, it appears that the program is adequate in giving academic studies commensurate weight with vocational studies and in permitting each student to proceed at his own rate of speed with flexibility in scheduling of his academic or skill training. The average size of the typical basic education class in this program, i.e., about 25 to 35, is slightly above the recommended maximum of 30.

The one factor that is noticeably lacking in the present program is that of effective integration of academic studies with that of vocational skill training. It was the opinion of two separate observers of the program that there is poor integration of the vocational and academic phases of this program with altogether too little attempt to use vocational skill and training as a vehicle for general education.

2. Vocational Elements

There appears to be a most adequate pre-vocational program, providing opportunity for the program enrollees to explore the vocational opportunities and requirements of different occupations prior to the election of skilled training at the eleventh grade level. Moreover, there also appears to be a variety of skill offerings, with adequate exposure in depth. Also, through the use of citizen's advisory committees, there is periodic up-dating of the skill offerings, and, too, there has been a substantial investment in new equipment and physical facilities for the program.

Thanks to the special vocational education survey in 1962-63, and through the effective counsel of the citizen's advisory committee that accomplished the survey, the program has been well-oriented to the local labor market. Also, the training options offered are well-articulated with the work demands of the city and metropolitan area.

There is excellent articulation between the eleventh and twelfth grades. Moreover, the final two years of the program seem to be well integrated with the ninth and tenth grade level programs.

In the cooperative work experience programs offered and the NYC programs employed, opportunity is given to program enrollees to earn income while they are learning. Moreover, the student receives adademic credit for his work experience, contributing to a regular high school diploma.

The only point where the program can be seriously faulted is that the average vocational class size is much too large; i.e., it is 25, contrasted with the recommended maximum of 15.

3. Administrative Elements

Until recently, faculty and staff in this program were predominantly white while almost all enrollees were black. This, in itself, does not indicate an overriding problem of communications, although teacher attitudes toward disadvantaged students were not always positive or sympathetic. This may be related to the difficulties a white faculty--that is not specially trained--may experience in attempting to identify with a student body of a different background and culture.

Moreover, there was little evidence of curriculum improvement as a result of systematic feedback based on student performance on the job. A contributing, if not determinative cause of this reality may be that the employment counselor has an unmanageable caseload.

The one element in this category in which the program scores positively is that of good teacher-principal relationships; this program, now in its fourth year, appears to be characterized by good working relationships between its teaching staff and the supervisory personnel.

4. Behavioral Elements

In this category, it is difficult to come to any definite conclusion. Note has been made of the indefensibly high dropout rate of the program and behavioral problems. Moreover, the test data made available on the program indicates that the educational increments cannot be characterized as "high".

5. Supportive Elements

It has been noted that the school day has been extended to permit more flexible scheduling and also to permit an enrollee to pursue an academic objective at the same time that he is acquiring a vocational skill. Another observed strength is the fact that the testing program is quite mature, consistent, and meaningful. In fact, the testing data made available were among the most comprehensive and complete of all the programs reviewed.

However, the program must be criticized on several other scores. First, there is not enough in the way of adequate counseling and other supportive services. This was readily admitted by the principal of the school. Second, note has been made of the lack of involvement by parents in a meaningful and productive dialogue with the school; this type of dialogue is particularly appropriate for an inner-city school with a large number of seriously disadvantaged and alienated enrollees. Third, although the school principal insisted that there was a very high placement record of graduates, there were no program follow-up surveys to support this claim or to permit an evaluation of the relevance and effect of the program.

H. Comments

Early and effective attention should be given to a better articulation of the academic studies with the vocational skill programs. Second, staff additions should be made to permit a marked reduction in the size of the vocational classes. Third, additional counseling support should be brought to the program. Moreover, follow-up studies should be made of the placement experience of the graduates, to permit evaluation of the program's effectiveness and to contribute to improvement of its curriculum.

Finally, efforts should be made to establish a more effective working relationship among the program staff, the school administration, and the community. Related to this last suggestion, steps should be taken to have more Negro members on both the teaching and the supervisory staff. Also, through in-service training, efforts should be made to accomplish more positive attitudes among the teachers toward the disadvantaged students.

Earnest and effective steps should be taken to reduce the substantial dropout rate (20%) in the program. Constant and careful evaluation of the program content and methodology should contribute to this end.

A brief chart summarizing the data obtained and specific characteristics of Case Number 7 follows.

SUMMARY DATA: CASE NUMBER 7

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Northeastern Inner City
2. Type: Work Study - Vocational Education
3. Kind of School: Comprehensive
4. Age of Program: over 2 years
5. Enrollment: 855; Males ___% Females ___%
6. Average Age: 15-18 Grades 9-12
7. Race/Ethnic: White ___% Negro 95-99% Spanish American ___% Other ___%
8. Average Academic Retardation: 1 year
9. Family Income Under $3,000: 20 %
10. Primary Occupation of Heads of Household: Blue Collar

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 25 Basic Education 25-35
2. S/I Ratio: Vocational ___ Basic Education ___
3. Diploma/Certificate: Regular High School Diploma
4. Number of Vocational Offerings: 13

III. TEST DATA

	Pre-Test (Metropolitan)		Post-Test SAT (SERD)	
	Reading	Arithmetic	Reading	Arithmetic
Grade	8	8	12	12
N	154	154	165	165
Score	7.1	7.5	7.7	6.6

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 20 % Prior to Program ___% Regular School 8.5 %
2. Follow-Up Data:

Of 323 graduates, 150 students were placed on training related jobs and 100 students pursued post-graduate training.

V. COST DATA

1. Annual Cost/Student: $ 600
2. Cost/Student Hour: ___
3. Average Annual Starting Salary for Vocational Teachers: $ 5,900

CASE NUMBER 9

A. General Description

This program has been in operation since 1964 as a continuing vocational education experiment. It is operating in six secondary level schools located in a unified school district in a West Coast industrial city. One school is the subject of this case study because of its particular success. However, 13 other schools within the metropolitan complex are also participating in the program and are also termed successful.

The purpose of this project is to equip disadvantaged inner-city youth with vocational skills and attitudes that would enable them to qualify for jobs after graduation. Participation in the two-year program is restricted to eleventh and twelfth grade students. Academic performance of these students had been characterized as poor, although they are of average intelligence.

A unique feature of the program is its effort to control fragmentation of subject matter. Courses are not separated in terms of science, math, English and shop, but are integrated to make them relevant to the practical aspects of the work world. According to the staff, this approach has been instrumental in increasing student motivation.

The program has been developed with the cooperation of educators, school officials, and the business community. Some ideas came from research; others represent the application of practical knowledge. Teachers are learning to manipulate subject matter as part of a mutual effort to create a flexible educational system geared to meet the needs of various backgrounds, ability levels, and fluctuating demands in business and industry.

The curriculum is fluid. Curriculum teams composed of representatives from education and industry, have been established to continue re-evaluation of the program.

Teachers and counselors have had success in securing jobs for graduating students. Another special feature of this project is the establishment of an intensive, long-range, follow-up program of employment success. (Success here is defined as sustained employment for one year following graduation). Extensive data were obtained through the use of graduate survey instruments, follow-up questionnaires, and an employee rating scale. Some of the conclusions reached are noted in Section F.

B. Student Characteristics

Our quantitative information on the students comes from 1966 graduating class data. The graduates numbered 166, 35 of whom were boys and 131 girls. Some 24% came from poverty families.

In terms of race, 25.9% were white, 57.8% Negro, 7.8% Spanish-Speaking, 7.2% Oriental, and 1.3% "Other." The average age was 18-19; the I.Q. range for most students fell between 90 and 115. Student interest and involvement in the program was high.

Prior to participation in this program, the achievement level of these students was poor, but after exposure to the program, it improved substantially: students in the program fared better, academically, than pupils in the regular curriculum. Employers labeled their performance "outstanding." At the same time, the dropout rate fell to less than 5%.

C. Faculty and Staff

While instructors and counselors in the program are part of the regular school staff, they are selected by a special joint committee which includes the coordinator of vocational education, the school principal, the director of personnel, and others. Selection is made in accordance with the state credentials structure. Under that system, the highest credential is "Point 8", and every effort is made to select teachers at that level. With some exceptions, the program requires seven years of work experience in the specialty field, while the state minimum requirement is two years.

Unusually high standards are required of the full-time counselors. They are required to have 60 graduate units and a minimum of four and one-half years of work experience outside education.

There appear to be no problems in recruitment since there are some 10 applicants for every available position, because of the attractive area in which the program is located. No special recruitment techniques are used.

In general, the emphasis in faculty and staff development is on vocational experience, although those without degrees in education are required to take additional courses during their tenure.

D. Curriculum and Scheduling

This school is a comprehensive program with vocational offerings. Vocational offerings are in two-hour blocks, rather than one-hour blocks, as in other courses. A notable exception is the program in Food Technology. This was the first project FEAST program.[10]

The vocational offerings are selected at the suggestion of and in cooperation with the business community in consideration of the changing needs in the job market. In addition to the general fields, specialized courses are offered in: Food Services, Merchandise Handling, Paramedical Services, Hotel-Motel Aide Courses for Mentally Handicapped, and Advanced Business Education. The generalized courses include basic office machine operation, office procedures, typing, stenography, vocational drafting, and the automotive trades.

10/ For a detailed description of the curriculum and scheduling of FEAST and how it evolved at this school, See Bernard Asbell, New Direction in Vocational Education; Office of Education, U. S. Department of Health, Education and Welfare, O.E. 80047.

Average class size for vocational classes in the program is 27; for academic subjects in the program, it is 33. Vocational students are expected to fulfill the academic requirements of the regular high school diploma, and no special certificate program is offered. Specialized vocational instruction is offered at the eleventh and twelfth grade levels.

E. Administration

As indicated earlier, this program is administered in a technical high school within a unified school district that includes five other participating secondary schools.

Funds come through the state's Department of Education, Annual cost per student is $1,000 compared to $740 per student in the regular school program.

The follow-up studies have also been supported by the state Department of Vocational Education under the Vocational Education Act. Additional funding has been provided since February 1966, by the state Bureau of Pupil Personnel Services under Title V-A of the National Defense Education Act. In the 1966-67 school year, vocational education funds were provided for continuance of the study. The Ford Foundation provided partial matching funds to assist the project. NDEA funds have again been provided for the school year 1967-68. Vocational Education Act funds were provided by the state Department of Vocational Education, but, as yet, no other source of matching monies has been found.

F. Impact of the Program

The impact of the program may be judged by its effect on the curriculum, the students, the business community, and the educational world. In addition, the program should be judged by the success of its follow-up studies. (For the 1965 class, statistical data on graduates are presented in the Summary Data charts).

1. The curriculum: The program has expanded the vocational education curriculum and re-directed the teaching of academic subjects.

2. The students: The program has perceptibly raised student interest and involvement. The dropout rate is less than 5%. The typical student is superior in academic subjects to students in the regular program. Because of the program, the average student's performance on the job has been called outstanding. Graduating students have an employment rate of 85%.

3. The business community: The business community has become involved in the educational process and in the formulation of curriculum. It is beginning to apply the benefits of research gained in the follow-up studies to the performance on the job of employees who have been hired through other sources. It is providing jobs, not only for those students who are superior, but also to those who are average and below average.

4. The educational world: This program could serve as a model for others. In addition, techniques and procedures are transferable to other situations and organizations other than schools.

The follow-up studies offer these conclusions concerning employment success of disadvantaged youth:

1. Vocational courses assist graduates in achieving job success. In addition, other subjects related to the type of work pursued contribute toward employment success.
2. Race is a factor in employment success for Negro females as compared with Spanish-speaking or Anglo females. Possible interpretations are:
   a. Negro females are less adequately prepared than Spanish-speaking or Anglo females.
   b. The rating scale used to measure success did not adequately assess unique Negro female attributes in accordance with job success.
   c. Race is an occupational handicap for Negro females.
3. Race was not a dominant factor in the employment success of Negro males.
4. Interest and motivation on the job for program graduates is high.
5. The influence of teachers and counselors is more a result of personal interest than subject matter or teaching techniques.

G. Qualitative Impressions

In our opinion, this is a superior program which can serve as a model for adoption by other large urban centers. It is open-ended, well-structured, and in a continuous process of adjustment and growth with feedback providing a concrete record on which to base its effectiveness.

Vocationally, it demonstrates that, when properly trained, most deprived youth can compete successfully with individuals of other socio-economic backgrounds.

The program has contributed to the development of a close working relationship between industry, schools, and the community.

Some successful techniques developed by the program could be employed successfully by schools other than vocational institutions.

H. Comments

We would recommend the following:

1. That the results of this program and its follow-up studies be published and made available to the school systems of all large, industrial, urban centers.

2. That special attention be given to securing additional funds for further expansion.

3. That every effort be made to accelerate the introduction of curriculum changes suggested by follow-up and evaluation studies.

A brief chart summarizing the data obtained and specific characteristics of Case Number 9 follows.

SUMMARY DATA: CASE NUMBER 9

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: West Coast; Industrial City
2. Type: Vocational Education
3. Kind of School: Comprehensive with Voc. Ed.
4. Age of Program: 4 years
5. Enrollment: 440 ; Males 21 % Females 79 %
6. Average Age: 18-19 Grades 11-12
7. Race/Ethnic: White 26 % Negro 58 % Spanish American 8 % Other 8 %
8. Average Academic Retardation: ____ years
9. Family Income Under $3,000: 24 %
10. Primary Occupation of Heads of Household: Service, Blue Collar

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 27 Basic Education 33
2. S/I Ratio: Vocational 27/1 Basic Education 33/1
3. Diploma/Certificate: Regular High School Diploma
4. Number of Vocational Offerings: 11

III. TEST DATA

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 5 % Prior to Program ____% Regular School ____%
2. Follow-Up Data:

   Not available for the 1967-68 year. For previous years, follow-up data shows only 3.4% of graduates were unemployed, while 15.7% went on to a four-year college full-time. Approximately 5% went to college on a part-time basis, and 25% advanced to a junior college full-time.

V. COST DATA

1. Annual Cost/Student: $ 1,000
2. Cost/Student Hour: ____
3. Average Annual Starting Salary for Vocational Teachers: $ 7,000

CASE NUMBER 10

A. General Description

This work-study program established in August 1965, aims to provide school-alienated youth with job skills and to bring about behavioral changes through a special program of guidance and counseling. It combines occupational training with academic instruction. Students attend classes three hours and work four hours each day.

The program is located in an eastern seaboard industrial city with a population of about 800,000. The largest industries (electrical and electronic equipment) were (at the time of the study) experiencing a shortage of trained personnel, so the program worked closely with local employers, 76 of whom provided part-time jobs for students.

An effort is made to enroll a combination of actual and potential dropouts through the cooperation of other schools and agencies. "Potential" dropouts are referred by administrators and guidance counselors of other schools, which include three junior high schools, two middle schools, and two high schools. Through social workers and the state employment service, a roster of 260 actual dropouts was compiled and the individuals contacted through letters, telephone calls, and personal visits. The list of potential dropouts is kept current, allowing for "rolling" admissions as necessary.

B. Student Characteristics

About 77% of the students are potential and 23% are actual dropouts. Of the 240 youths enrolled in March 1968, about one-third were female and 25% were Negro.

An independent study of the home backgrounds of the students in the program shows that less than one-third came from stable or "good" home environments, over half came from unstable or "poor" homes, and the remainder came from homes categorized as "fair." Student I.Q. scores averaged about 90.

In addition to being either actual or potential dropouts, students must meet these criteria: interest in entering the program; no serious physical, mental, or emotional handicaps; evidence of motivation to work; and no active court record. Although most of them were reading below their grade level, they measured at just about the national norm when adjustments were made for intelligence. There was an average lag of two years in academic achievement; the average student reached the ninth grade at the age of 16.

C. Faculty and Staff

The staff consists of one director, nine vocational instructors, nine guidance counselors, three basic education specialists, two social workers, and one psychologist. The department head of practical arts for the local school system has doubled as acting director since August of 1966. The project was unable to recruit a fully certified social worker; thus a person with guidance certification assumed this role. Since a certified psychologist was also unavailable, a guidance counselor filled the position.

Vocational instructors must have a high school diploma, seven years of trade experience, and have completed two education courses. Guidance counselors are required to hold an M.A. in Guidance, and have one year of practical work experience and one year of successful teaching experience.

The director receives an annual salary of $12,000; the guidance counselors and vocational instructors, $8,300; and the basic education specialists, social workers, and psychological examiner, $9,000 per year.

An analysis of teacher effectiveness showed that 80% of the enrollees were pleased with the program and with their teachers.

This was probably due to the careful screening and in-service training of the teachers. In the selection of teachers, the project seeks a combination of qualities above and beyond education and experience. Other important qualifications include good personality, respect and concern for the student, and a sensitivity to student needs. In general, the qualities being sought are summarized in the statement: "A teaching team so well qualified that it would succeed with any student."

A number of students and parents have written the director, expressing appreciation for the special services offered by the teachers. For example, one student explained how his teacher pursued him by telephone and several home visits to stay in the program. The student said he decided to return and now feels like "a new man."

During the summer prior to the start of the program, a special in-service relationship was established. A special consultant assisted in organizing teaching materials, selecting appropriate textbooks and reference materials, and providing reading lists to help teachers better understand the special needs of their students.

Some characteristics of the staff and faculty are:

--Mathematics is taught by a young man with experience in working with children with special needs. He spent two years with the Peace Corps in Africa before joining the staff.

--Science is taught by a mature man who is in his first year of teaching, but has had many years of experience in industry prior to receiving a degree in education.

--The Social Studies teacher has had private school and settlement house experience, in addition to having worked two years in India.

D. Curriculum and Scheduling

Skill training is offered in: automotive services, food services, health services, landscaping and horticulture, office services, maintenance and repair operations, manufacturing operations, and retailing services. Each vocation is taught in a specialized training area, equipped with appropriate tools, machines, and other equipment.

Each vocational group has a vocational instructor and a guidance counselor. The guidance counselor is stationed in the work area and fuctions as a counselor-instructor. The classes are limited to a maximum of 15 students and the student-teacher ratio is approximately 8:1. Students work four hours per day and attend classes for three with a choice of either morning or afternoon classes.

Students may pursue a vocational certificate and/or a high school diploma. Progress in training is measured by demonstrated competence in the chosen vocation. This same standard is applied to the granting of the high school diploma.

Typical of the types of programmed instructional materials used are those in the area of mathematics which include the "ASMD" series on fundamentals by the Addison Wesley Company, and TEMAC, an algebra program by the Encyclopedia Britannica. In addition, traditional texts in paperback form are used in conjunction with aids such as the Computational Skills Development Kit of Science Research Associates.

The center is well-equipped. In auto mechanics, the shop laboratory is housed in the newest addition to the school and is an actual working garage containing three bays, two frame contact lifts, and a complete assortment of tools and equipment.

In the child-care area, the shop laboratory is a complete kitchen cafeteria, including various types of refrigeration equipment, utensils, a fountain, cash register, washing equipment, etc.

The maintenance and repair program utilizes milling machines, lathes, drill presses, etc.

The landscaping and horticulture program includes a small engine repair laboratory. There is a nursery on the school grounds.

E. Administration

The program is funded by federal, state, and local agencies. The budget during the pilot period (May 1, 1965 - August 31, 1967) was $872,220. The federal government contributed $486,980; the state, $154,000; and the local government, $231,240. An amended budget for the 1967-68 school year submitted in September 1967, showed expenditures of $139,154 by the city, $45,230 by the state, and $75,000 by the federal government, for a total of $259,384. Of this amount $216,384 was budgeted for personnel, $2,000 for transportation, repair and maintenance, office supplies, instructional equipment, textbooks, postage, utilities and supplies, and $18,000 in federal funds for research and evaluation.

The program director is responsible to the coordinator of vocational education for the city school system. A staff of professional consultants for research and evaluation, in-service training, curriculum development, liaison and reporting, as well as the faculty are responsible to the director. A local Vocational Education Advisory Council consisting of business, industry, school, and employment representatives also works in cooperation with the director.

F. Impact of the Program

Several independent evaluations indicate the program has several elements of success. One team reviewed 100 case studies of students, 50 male and 50 female, concluding that the program had succeeded in effecting behavorial changes. The majority of the 100 students were "better-dressed, better-motivated, better-behaved, and more dependable" than they had been at their previous schools or when they first enrolled in this program. However, another study noted that students in the program improved significantly more than a control group in only one of 13 criterion measures--the vocabulary section of the California Reading Test.

The director claims the program receives strong support from parents, employers, civic groups, churches, and the police. The program received an award from the National Education Association and was nominated for another award by the State Youth Commission.

The retention rate was high with a dropout rate of only 10% before completion of the requirements for either a vocational certificate, a high school diploma, or both. Most of the dropouts either joined the armed services or found full-time employment. Approximately 25% of the students received high school diplomas. The cost of this program, as estimated by the administration, is double the per student cost in the regular schools of the system.

G. Qualitative Impressions

While the quantitative achievements of this program, especially the high retention rate, are impressive, the achievements were diluted considerably by the initial process of screening and selection of enrollees.

The program excludes the "hard-core" disadvantaged dropouts in favor of borderline students with academic problems. This is a serious criticism, and one which nullifies much of the value of the project to this study.

Since the enrollees are selected on the basis of strong motivation toward work, it is reasonable that students would retain and build on this in the course of the project. Since students with active police records, serious mental, physical and emotional handicaps are screened out, other positive results in the program could also have been anticipated.

The comparative lack of emphasis on academic achievement indicates that the purpose of this program is to give below average, but "safe" and acceptable, youth the minimum credentials and training required to enter the job market.

The claimed retention rate of 90% is fairly high, showing that the students must feel they are getting something out of the program. Since their academic achievement was not significantly improved, they were possibly most interested in the vocational training they received and the opportunity to work part-time while attending school. No data are available on the eventual job placements of these students after they have completed the training requirements, nor does it appear that any follow-up of employed former students is made.

The academic program itself produced no measurable results, and it would appear that vocational education was given a greater emphasis. The guidance counselors doubled as basic education instructors (with only help and guidance from the basic educational specialists) and developed individual study plans for the students. The classes are small, with a maximum of 15 students, and the students are not forced into a schedule, but rather are allowed to progress at their own rate of speed. With all instruction being given in the vocational shop, it is difficult to determine what distinctions, if any, are made between academic and skill training, and, indeed, if learning can in fact take place within the confines of a skill training area with various machines in operation.

There is no pre-vocational program in which the students can sample a variety of occupations before selecting one in which they would prefer to receive training. This decision is made for them by the counseling and instructional staff, with some consultation as to their own preference. The variety of occupations offered is wide, although all are semi-skilled. There appears to be no orientation to the labor market; this is probably unnecessary since all of the students are already working part-time. The counselors double as placement officers as well as basic education instructors.

There is definitely strong counseling support, although one wonders whether the triple role of the counselor is not somewhat confusing for the student, as well as draining on the counselor's time and energy. Counselors seem to handle the placement function with distinction: 96% of the students work part-time at some job: 71% of these jobs are directly related to the training they are receiving, and 50% are placements made by the program staff itself.

While the program itself did some subject matter testing, the most extensive testing was done by outside consultants. In a study on academic achievement, the investigator complained that conditions for the testing were not the best (perhaps strong evidence of parental support for the program is the fact that no satisfactory control group could be found because of the heavy pressure by parents on the school system to have their children admitted to this program!).

The program is well received by the employers, and understandably so. Other clues to the nature of this program are absence of a pre-vocational program in which students may sample a variety of occupations before selecting one; all the vocations offered in the program were semi-skilled; the duties of counselors include placement and job development (apparently, no conflict is seen between these two roles).

In short, this program has all the earmarks of being a service to employers in a market with skill shortages, relieving the employer of certain expenses and responsibilities for screening, selection, and training at entry level.

H. Comments

While the successful components of this type of program have their place in the regular curriculum, the relatively high cost, much of it incurred by agencies outside the community, is difficult to justify.

The admission policy should be reversed, literally, to give priority and preference to the "hard core" dropout, the disadvantaged, and the student with emotional, physical, and behavioral problems.

There is evidence that students seek out the program. Recruitment policy and personnel should be re-directed toward outreach for those who are no longer in school.

Another attempt should be made to test and study the academic curriculum. Consideration should be given to the addition of a pre-vocational program to assist students in making career decisions.

A brief chart summarizing the data obtained and specific characteristics of Case Number 10 follows.

SUMMARY DATA: CASE NUMBER 10

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Northeast; Large City Suburban
2. Type: Special Needs; Vocational Educati
3. Kind of School: Vocational education-full term.
4. Age of Program: over 2 years
5. Enrollment: 240 ; Males 67 % Females 33 %
6. Average Age: 17 Grades Ungraded
7. Race/Ethnic: White 75 % Negro 25 % Spanish American ___ % Other ___ %
8. Average Academic Retardation: 2 years
9. Family Income Under $3,000: 40 %
10. Primary Occupation of Heads of Household: Blue Collar

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 15 Basic Education 6
2. S/I Ratio: Vocational 8:1 Basic Education 6:1
3. Diploma/Certificate: Regular High School Diploma; Vocational Certificate
4. Number of Vocational Offerings: 8

III. TEST DATA

(In the evaluation of this program, there were problems with the test data. See Quantitative Impressions section.)

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 10 % Prior to Program ___ % Regular School ___ %
2. Follow-Up Data:

25% of students graduated; 96% of students placed on training related jobs part-time during school year.

V. COST DATA

1. Annual Cost/Student: $ 2,137
2. Cost/Student Hour: ______
3. Average Annual Starting Salary for Vocational Teachers: $ 8,300

CASE NUMBER 12

A. General Description

The project school is located in a major mid-western industrial city (population about 750,000). It was opened in 1966, as a school for students expelled from the municipal public school system. The objectives are:

1. To increase achievement in the basic skill areas--reading, language arts, writing, and mathematics at the individual student's level.

2. To provide a means by which students who need more time for learning, who exhibit patterns of disruptive behavior, or who lack motivation for reasonable achievement in school may be assisted in overcoming these deficiencies.

3. To build positive attitudes in each individual child.

4. To prepare some students for a useful vocation and citizenship.

To accomplish these objectives, the schools offer an intensive academic program geared to individual needs through small class size (12 students, on the average), extensive counseling services, and an occupational work experience program.

Students are given credit for all work done at the school. Those who fulfill graduation requirements while enrolled here receive a diploma.

The average stay at this school is one academic year. Students are enrolled throughout the school year. The maximum capacity is 288, and there is always a waiting list. During the 1967-68 academic year, a total of 450 students attended.

B. Student Characteristics

The students are drawn from all public high schools in the city. The range is from 14 to 20 and grades range from 9 to 12. Two-thirds are boys and 90% are Negroes. It is estimated that about 90% of the students come from families with substandard incomes.

All students have some kind of behavioral problems which led to their expulsion from the regular schools. In addition, many have delinquency records.

I.Q.'s vary widely. A sample of 101 subjects yielded a spectrum of 74 through 123, and an average of 92.9.

C. Faculty and Staff

The program employs 21 teachers. Teacher certification is required which includes a bachelors degree with courses in education, attaining a passing score on the National Teachers Examination in general areas, plus one specialty area.

The superintendent of schools gave this program top priority in choice of teachers. Of the 4,600 teachers in the system, some 700-800 were screened through a process which included examination of records, interviews with peers, and actual on-site evaluation of performance in the classroom. Emphasis was placed on youthfulness, flexibility, creativity, and knowledge of the specialty field. Recruitment was enhanced by the following: teachers are given an additional $1,000 per year; student/instructor ratios are better than in the regular program; and a master teacher is allowed flexibility of curriculum instructional techniques. However, with cuts in Federal funds during the 1968-69 year, the additional salary will only be $500.

In preparation for the opening of the 1966-67 fall term, the specially chosen faculty attended an experimental summer program consisting of 220 class hours of in-service training. Additional staff consists of a principal, an assistant principal, four counselors, two social workers, a work coordinator/counselor, a nurse, and a librarian.

The counselors and social workers play an important role in the program. The ratio of one counselor to 72 students is much lower than for most large city high schools. The four school counselors are available to discuss any problems the students may have. They also conduct group guidance sessions attended by students three times a week. The two full-time social workers make house visits. By seeing the home environment and talking with the parents, they make it easier for the school to diagnose a student's problems and come up with a viable solution. The job coordinator/counselor seeks out jobs for those students who want to work part-time. Most of these jobs are entry-level unskilled or semi-skilled, such as service station attendant, bus boy, waitress, etc. The job coordinator supervises the students after they are placed on the job.

D. Curriculum and Scheduling

An indication of the flexible nature of this program is the fact that the curriculum has been radically changed in each of the program's two years of operation. During the semester prior to the school's opening, several carefully selected teachers were assigned the task of developing tentative curriculum guides. These were further refined and developed.

Staff members visited a number of schools in the Midwest and East that were notably successful in operating programs for the disadvantaged. These visits proved most profitable and many excellent ideas were brought back. An ungraded multi-level curriculum emerged. Depending on their score on the Iowa Achievement Test, students are scheduled into courses on one of four levels:

--Level I is designed as a remedial program for those severely retarded academically.

--Level II is designed for students only slightly below their grade level.

--Level III is meant for students whose performance is normal.

--Level IV provides depth and concentration for academically superior students.

All students take the following courses at the appropriate level: communication (two periods daily); mathematics (one period daily); social studies (one period daily); typewriting (one period daily); home economics, industrial arts, or art (one period daily); library and group guidance (on alternate days).

A multi-text approach is used. Fox example, in social studies, 50 textbooks are used. Typical titles are: Applied Economics; Building Your Life; Challenges for a Free People; and The Citizen and His Government. Some of these books are available in the classroom and some are available in the library.

About half the students participate in a work-study program. These students attend school for a half-day and work in local businesses the other half-day. Credit toward high school graduation is awarded for such work.

The curricula was continually re-evaluated and revised during the initial year of operation. Departments met at least once a week to chart progress, make revisions, and plan for greater effectiveness. At the conclusion of the school year, each department conducted a formal self evaluation, resulting in the following changes: increased time allotted for home economics; employment of new materials and tests for languages, arts, and mathemetics; and the use of both secondary and upper elementary school teachers as instructors.

The school has not developed a comprehensive vocational training program because the administration contends that one year is inadequate to attain such an objective.

E. Administration

The school functions as a regular high school reporting to the municipal board of education. In addition to state and local funds, it receives support from Title I, ESEA.

The annual program cost per student is $540.00.

F. Impact of the Program

Like similar efforts, this program has been in existence too short a time (since 1966) to permit a complete evaluation. Its main contribution lies in providing a last chance for students not wanted in other high schools. Progress can be measured tentatively by the fact that the school's dropout rate decreased from 20% in 1966-67 to 14% in 1967-68, and that serious behavior problems are rare. In the two-year period, 180 students returned to their regular schools. The school's principal believes that counseling and individual attention are largely responsible for these improvements.

Academic achievements are creditable. We cite data for the pre and post-test results of the Iowa Achievement Test administered to about 110 of the 17 and 18-year-old students. It should be noted that the students are first administered this test when they enter the school, which may be any time during the academic year. Accordingly, there is a variable time lapse between pre-test and post-test from student to student. An average of four-fifths of a year elapsed between the pre-test and the post-test.

Students are expected to achieve a 0.1 grade increase in their achievement score for every month in school. Reading achievement increments are currently only half of the optimum score. However, the results of the arithmetic tests were better. They showed an average gain of 0.6 for 0.8 year's time. (See Summary Data chart).

The average scores conceal substantial gains of certain students. A total of 34 of the 110 students progressed at better than a one grade achievement for one year in school with respect to arithmetic. Only 15 students had lower reading post-test scores than pre-test scores, and only 19 scored lower on the arithmetic post-test than on the pre-test.

The school is conducting an evaluation that, hopefully, will include work follow-up data.

G. Qualitative Impressions

The program is housed in a former old synagogue that was purchased by the school board for the program. In renovating the building, care was made to make the physical plant as cheerful and attractive as possible.

Program staff indicated that students who had exhibited very hostile behavior in regular high schools appear as well behaved and mannerly as students of any middle-class, suburban school. Apparently, moving them into a positive setting from situations where they had experienced frustration and failure has had a salutary impact on their attitudes. The falling dropout rate referred to previously, and the significant number who return to their original schools support this contention.

The school's brochure states that the jobs students obtain in the work-experience program "must offer opportunities for genuine training." This is not being achieved. The principal himself admits that the types of jobs available are menial and dead-end.

Too much of the staff's time is used in processing new students who arrive sporadically throughout the year. In attempting to correct this, the school is resorting to increasingly greater utilization of programmed materials.

H. Comments

Based on the above analysis, the following changes are recommended:

1. Increased emphasis on the work-study program to provide a more meaningful experience. This would include a serious attempt to persuade area employers to hire students for jobs with promotion possibilities. Promotions would be dependent on the student receiving his high school diploma and would serve as a motivating force for completing school.

2. Continue the on-going evaluation.

A brief chart summarizing the data obtained and specific characteristics of Case Number 12 follows.

SUMMARY DATA: CASE NUMBER 12

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Midwest Large Inner City
2. Type: Work-Study
3. Kind of School: Comprehensive
4. Age of Program: 1-2 years
5. Enrollment: 288 ; Males 67 % Females 33 %
6. Average Age: 16.8 Grades 9-12
7. Race/Ethnic: White 10 % Negro 90 % Spanish American ____% Other ____%
8. Average Academic Retardation: ______ years
9. Family Income Under $3,000: 85-90 %
10. Primary Occupation of Heads of Household: Blue Collar; Service

II. INSTRUCTIONAL DATA

1. Class Size: Vocational ____________ Basic Education 12
2. S/I Ratio: Vocational ____________ Basic Education 1-12
3. Diploma/Certificate: Regular High School Diploma
4. Number of Vocational Offerings: ________

III. TEST DATA

IOWA ACHIEVEMENT TESTS

	Pre-Test		Post-Test	
	Reading	Arithmetic	Reading	Arithmetic
Grade	10.2	10.2	10.9	10.9
Score	8.1	7.7	8.5	8.3
N	109	111	109	111

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 14 % Prior to Program 20 % Regular School ____%
2. Follow-Up Data:

65 graduates; 125 students place in training related jobs.

V. COST DATA

1. Annual Cost/Student: $ 540
2. Cost/Student Hour: ________
3. Average Annual Starting Salary for Vocational Teachers: $ 6,200-6,820

CASE NUMBER 13

A. General Description

This is the oldest program in this study, established in 1912 in response to a state law which required youth to attend school until they either completed high school or reached the age of 18. The importance of this program stems from the long experience the school has had in dealing with the education of disadvantaged students who are unsuccessful in regular programs and who would drop out of school if they were not required by law to continue their training.

The school is located in a large midwestern city. It is designed to serve the entire metropolitan area; however, two-thirds of the students live in the older "inner-core" area. Families in this area live in substandard housing and incomes of less than $4,000 per year are reported for about 65% of the families. Crime and delinquency rates are high. The area shows evidence of being socially disorganized. Most parents are employed in service and blue collar occupations in manufacturing and service industries. The ethnic composition of the population in the metropolitan area consists largely of highly vocal and militant European and Negro minority groups11/--with the Negro group concentrated in the "inner-core."

Paradoxically, the community tends to view the school as "a baby-sitting operation for dead-end kids," or, more positively, "They're really trying to do something for kids everybody else ignores."

The school describes its purpose as "Bridging the Gap: After Breaking Off Your Normal School Career--Another Opportunity." The title is somewhat self-explanatory; i.e., students who drop out, or who are encouraged to leave a regular program, can get the skill training they need for employment; or, if they overcome some of their academic or behavior problems, they can return to a regular program. The school does not award a diploma.

Emphasis is placed on improving the attitude of the students and on helping them to gain the self-confidence needed for the adult work world. These goals are sought through intensive counseling, student evaluation, and academic instruction.

B. Student Characteristics

Enrollment in the school from September 1967, to June 1968, was approximately 1,336 students, more than two-thirds of whom were male. The age range of the students was 16 to 18 years. The enrollment was nearly equally divided between Negroes and whites. Many of the students were of Polish descent and there were a few Puerto Ricans and Mexican Americans.

11/ There is considerable hostility between the two groups.

The average I.Q. of the enrollees was 71.7; the scores, however, ranged from 55 to 123. The average reading level was at less than the seventh grade, while the arithmetic achievement level was at the sixth grade. The average academic retardation was four years.

Many students come from broken homes. Few have severe physical problems, but most have health problems resulting from a poor diet, insufficient rest, and their general slum background. A large number have delinquency records, especially for truancy; about 40% have a history of one or more infractions of the law.

The students exhibit three main types of behavioral characteristics. A number are chronic truants. Secondly, there are those students who attend school, but who act out their hostility in a direct manner. In many cases, this acting out of their problems characterizes their behavior before they are transferred to the program and, in all likelihood, is the major factor in the transfer. Finally, some students are very passive and do only the work required of them.

C. Faculty and Staff

In selecting the staff for this program, emphasis is placed both on the amount of formal education the applicant has (e.g., he must be working toward his M.A.), and his previous experience in working with the disadvantaged, unmotivated student. The faculty is encouraged to enroll in special courses and institutes offered at the state university and a nearby college emphasizing the "non-motivated", non-achieving student.

The supporting staff is adequate. During the ten-week diagnostic period, there are eight full-time counselors for the school. Six counselors employed by the vocational school are also available to the school for special counseling and testing. Faculty salaries begin at $7,039, and go as high as $12,000.

Perhaps the most important development in this project in terms of teacher quality and morale is a highly developed in-service training program. A course, called "The Improvement of Curriculum Instruction," was started in 1964, with one hour per week sessions. Eventually, all members of the faculty receive the benefit of the course.

The 18 sessions are divided into three parts: The first six sessions are exploratory, stating the issues and providing a basis for self-examination; the second group of six sessions involves operations of the school; and the third group is an application of accrued knowledge in working with the types of students enrolled in the school.

A series of workshops involve discussion of such topics as: what can teachers do to upgrade substandard culture? How can each student become actively engaged in the learning process? How can we encourage students to develop self-discipline? How can we help students develop proper attitudes toward the dignity of labor? How can we encourage self-expression? What can be done about low attendance? Other workshops on guidance, the philosophy and objectives of the school, and similar topics are also presented.

An evaluation of the in-service training has been made and is worth repeating for the purpose of understanding attitudes and motivations of teachers in this program. The major conclusion was that "the nature of the students was well covered, but their needs "were brushed over." Not enough time was given for adequate discussion of the questions. The teachers felt they were "just beginning to scratch the surface." In the in-service training situation, the majority of the teachers felt that the panel situation was a worthwhile way to obtain information. The majority also felt that local and outside authorities provided useful information and this portion of the program should be continued.

During these sessions, students were required to attend a special assembly. This provided control over the students at a time when teachers were in an in-service session during school hours.

The results of the sessions, as well as the existence of this type of in-service training is indicative of the desire of teachers to adjust more fully to the specialized needs of their students. Additional plans are being made to improve curriculum and instruction through further in-service training. Sessions now include such subjects as new techniques of instructing students by television, team teaching, and programmed learning; new book material; guidance in job placement problems of deprived students; and understanding psychological and sociological characteristics of students enrolled in the school.

Remarks by participants have been recorded. Here are some of their comments:

> "After my first year of counseling, I concluded that I was not making progress, and discipline problems were occurring faster than I could keep up with them. We then created the largest system of student participation in school government that has ever existed...the student council plan was a great success."
>
> "Some of them (students) still have this old fashioned idea that there's supposed to be some teaching going on in the classrooms. And the problem is, of course, that these individuals will test and test and test because they want to see if you really care for them. They can put you through your paces and if you still seem to be interested, you still like them even though you aren't giving them everything you're supposed to be asking for, gradually you're going to pass their probation period and they're going to start relating."
>
> "Very often, these individuals (students) do not want to try anything which involves sticking their necks out half an inch. And as you really get to look at them, they operate in a constricted little world made up of certain wise remarks and tough attitudes. But they really never stick their necks out for anything or anyone because as soon as they expose themselves a little bit, they might be hurt, they might fail, and this they can't do."

D. Curriculum and Scheduling

For the first ten weeks, the entering student is in the "diagnostic quarter." During this period, he experiments with various vocational areas to reveal his aptitudes and interests. Boys take two industrial shop courses, and girls take business and home economics. All students take diagnostic academic courses in reading, arithmetic, and social studies. They are intensively counseled in small groups. There are free-wheeling, small group discussions in which the faculty finds out a student's primary interest and what he likes and does not like about the school; an effort is made to make the student feel that he has a role in the program. Not only does this counseling help the student, but it helps the school to keep its finger on the pulse of student needs.

1. Work Area Courses

After the first ten weeks, students spend half the school day in the work area and half in general education. The work area courses are three hours in length, and are listed below with the approximate average 1967-68 enrollment.

Home Economics	125
Business	50
Industrial	250
Construction	110
Graphic Arts	35
TOTAL	570

Training prepares students only for entry level jobs. Before transfering to this school and while there, students are warned that a high school diploma is mandatory for good jobs and that, on the basis of their training, they can hope only for semi-skilled jobs. The school catalog states:

> "The day when a young man or young woman could quit high school and then study for a trade, later getting a good job in this trade, has largely passed. Very few trade opportunities are open today for a student who does not have a high school diploma. Therefore, a student who quits high school and plans to come to (Case Number 13) ...has closed the door on many of the better job opportunities.
>
> "Skilled vocations today require ability in arithmetic and reading, in addition to other skills. Those who do not have the high school background and cannot handle reading and arithmetic with competence cannot expect to secure genuine trade training. However, in your school work, you can develop personal characteristics that will make you valuable to employers. You will be able to take the simpler kind of work that can be learned on the job and then work for promotion on the job."

Students who do well in the vocational program can be transferred to the adult vocational school for more intensive advanced training. All students are encouraged to go back to their regular school or to go to adult school after they turn 18 to obtain their high school diplomas. Only about 10% are known to have done so.

2. General Education Courses

The students take academic subjects in basic math, English, and social studies. The academic courses are geared to the world of work and everyday living. For example, there are courses offered carrying the titles "Practical English," "Everyday Arithmetic," "Related Shop Mathematics," and "You and Your Money." Remedial reading courses are offered for those students who are severely academically retarded. The average class size in the academic classes is 21, and 16 in the vocational classes.

3. Curricula Improvement

There appears to be a systematic effort to improve the curricula. There is a full-time curriculum coordinator and all courses are evaluated every two years. Teachers provide suggestions through the faculty committees in each department.

In recent years, programs have been offered for in-service training of program teachers and counselors. In September 1964, the first in-service faculty institute was conducted over an 18-week period. Fifty-five teachers and counselors participated. The sessions were held for one hour each week. The first few weeks were spent listening to guest speakers discuss problems of educating the culturally disadvantaged. In later weeks, the faculty split into workshops and discussed all phases of the curriculum. From these sessions, eight "priorities" were established to meet "the present needs of (the program's) students." At the present time, all of these recommendations either have been implemented or steps are underway to implement them.

Another in-service training institute was held in 1966-67 sponsored by Title I of ESEA and more are planned in the future. One of the innovative features that has been tried and one which has been well-received at the training institutes is team teaching. This technique has been employed in the program in its diagnostic quarter since 1957. Each team has one group of about 100 students. Students are assigned to an A, B, or C group, based on the results of I.Q. and academic achievement tests. The teaching team consists of seven teachers, two general shop teachers, a reading teacher, and an occupations teacher. Regular meetings of each team are scheduled to discuss problem students, specific needs for testing or psychological services, meaningful classification of students, and to review student evaluations of the program. In the 1968-69 school year, it is planned to expand team teaching into academic courses beyond the diagnostic quarter.

E. Administration

This program is part of the city's Vocational Technical and Adult Schools under the supervision of the city's Board of Vocational and Adult Education. These administrative arrangements differ from those in most cities, where usually only one board of education determines policy for both vocational education and academic education.

The school is run by a director with three assistants. The assistant director for instructional services is in charge of personnel; the assistant director for student services handles guidance and scheduling; and the assistant director for operations is in charge of the hardware, equipment, building maintenance supplies, etc.

There are six faculty counselors under the administrative officers, one of whom is the chairman of this program. He has one assistant.

The school receives some limited Title I, ESEA, funds, but most of the cost of the program is borne by the city. School officials feel there are no serious budget problems. The tax base is quite high in this city.

The estimated yearly cost per student is $670. The students attend school six hours per day for 35 weeks, so that the cost per student hour is about 64¢.

F. Impact of the Program

According to anecdotal data, in some instances parents, who themselves were enrolled in this program, encourage their children to enroll. However, once the students are in the program, it is difficult to get the parents to take an interest in the school and their child's progress. Apparently, parents feel ambivalent about the program. They fail to show up for conferences to discuss problems their children may be having. Unfortunately, the program has not made a serious attempt to correct this deficiency, which apparently involves a significant portion of the parents.

The community is willing to continue to finance the program, but few middle-class parents want their children to attend. Apparently, they view the school as being a good place for someone else's disruptive children, but not theirs. As one former state vocational education official said after making several positive comments about the school: "When we boil it all down, it is really "a baby sitting operation." The students are aware of the stigma that is attached to attending the school, as the following excerpt from an editorial from the December 1967, edition of the student newspaper makes apparent:

> LET'S CONVINCE THE PUBLIC!
>
> "What school do you go to?
>
> "I go to Vocational.
>
> "Vocational! How can you stand it going to a school like that? Why I've heard so much about that school.
>
> "What do you mean by that?
>
> "Well, it's nothing but a place to keep the kids off the street!
>
> "Perhaps as a student of...(Case Number 13)...I could tell you what has been happening."

Then, the writer goes on to point out some good features of the program.

The program's impact on truancy is not impressive. The students who transfer to the program do so because they do not like or cannot get by in a regular school program. If state law permitted, many would drop out. Since they must be in school, they prefer to go to Case Number 13, where there is no pressure to make grades. We suspect most do not really enjoy this school either. Thus, truancy is very high. One counselor devotes full-time to attendance, checking on truants, working with truant officers, etc. Average daily attendance is about 65%. Both the administration and the student leadership attempt to encourage good attendance by giving special awards for good attendance records and by constantly exhorting the students to come to school. A month seldom goes by that the student newspaper does not carry at least one article on truancy. Apparently, these measures have had little effect. Despite the state's Compulsory Attendance Law, enrollment at the school often completely turns over twice during a school year.

The students show good gains in tested academic achievement, as measured against pre-test data obtained during the diagnostic quarter. However, the educational increments noted below may possibly be skewed upward to some extent by the fact that more of the poorer students drop out during the diagnostic quarter than do the best students, thus inflating improvement in the achievement tests. A total of 186 program enrollees--134 boys and 52 girls--were studied in some detail. On the California Reading Test (Elementary Form W), data were available on 77 students (51 male and 26 females) in the form of pre- and post-test scores. These students were tested before admittance to class and then re-tested at the end of the diagnostic quarter after they had taken the Development Reading Course of nine to ten weeks in length. For the 77 students, there was an average score increase in grade levels, of one grade level in only one-third of an academic year. It should be noted that the 77 students on whom data were available, may not be representative of the total 186 students for whom only pre-test scores were known. Two facts suggest some similiarity between the two groups.

First, the percentage distribution of males and females is similar; i.e., 72% of the males in the total group and 66% of the females among the 77 students. Secondly, the total group mean on the pre-test is 6.1, not greatly different from the 5.9 mean of the 77 students.

Pre-test and post-test data on an arithmetic achievement measuring device were also available. Since girls in the program are not required to take mathematics, the data were calculated for 77 males on whom pre-test and post-test scores existed on the Wide Range Achievement Arithmetic Test. During the period between the tests, these students had been exposed to a nine to ten week course in Measurements, mostly of fundamental mathematics skills. The group showed a grade level increase from 5.3 to 6.3; this represents an increase in achievement of a full year in a period of ten weeks. Again, while it is not known categorically whether the 77 students are representative of the total group, the average pre-test score of all males (N=134) was 5.4, not significantly different from the 5.3 of these 77 students on whom post-test data were available.

The average stay at the school is only seven months. Even though the students showed significant improvement during the diagnostic quarter, it is apparent that the average tenure in a program of seven months does not give the school much time to bring the extremely low achievement levels up to anywhere near a high school level.

Apparently, the intensive counseling during the diagnostic quarter affects general behavior. A study, conducted by the head of the Counseling and Testing Department of male students entering the school in 1958, evaluated the effectiveness of group counseling and individual counseling in reducing aggressive behavior and hostility. It was found that significantly positive behavioral changes occurred among program participants who had been counseled, but not among an uncounseled control group that had part-time employment.

G. Qualitative Impressions

The fact that this program aims at the vocational education of truly disadvantaged youngsters cannot be disputed. Its clientele consists entirely of students who are chronic truants or who are overly aggressive or overly passive and who, for the most part, come from poor families. But serious questions can be raised as to how well it serves these disadvantaged youngsters. There are obvious program deficiencies.

The public views the program as "a holding," or "a baby-sitting" operation to keep disruptive children occupied in school as long as possible. And many parents, apparently even those who are products of the program, have less than positive attitudes toward the school. It is unfortunate that the program has not counteracted these preconceptions of the general public and of parents. The program has been inadequately and incorrectly interpreted by these two constituencies, and, with the exception of tax funds, they have brought few resources to the program operation.

Moreover, the educational impact of the program has been seriously limited by its high dropout rate. During the 1967-68 school year, 895 students dropped out of the program; this was 67% of the total enrollment for the year. Of the 895 who left, 594 withdrew upon reaching their eighteenth birthday. Most of the others withdrew because of some altercation with the authorities. Apparently, the students are "champing at the bit" to leave. This is unfortunate because it limits their time for academic progress. The gains in the diagnostic quarter show that the faculty is capable of teaching basic education, but there is not time for the program to have the maximum possible effect, nor are the students returning to the regular high school.

Truancy is a continuous problem. Skipping school is so widespread that the average stay in school of seven months is indicative of the time the faculty has to apply their talents toward raising student achievement.

Nevertheless, the program staff has demonstrated that, for those students who can be retained for a period of time measurable if not substantial gains in educational achievement and some positive behavioral changes can be realized. The dedication of the faculty--as evidenced by its voluntary participation in the in-service training and its effort to improve the curriculum--

is evident, with few exceptions. The effective use of team teaching during the diagnostic quarter is to be commended. It would appear that both the teaching and supportive staff are numerically adequate and well-trained.

An identifiable deficiency of the school is its inability to evaluate the job market success of the students after leaving the program. Attempts by school officials to follow-up students after they leave school have not been successful. On one occasion, post card questionnaires were sent to each student, but only 5% were completed and returned. Therefore, there are few statistics available for evaluating the effects of this program on the basis of employed graduates and on whether or not the training received helped the student to obtain employment in a training-related area. Nor can the relevance of the program be assessed with a view toward its improvement.

School officials do keep track, informally, of certain students; e.g., those who later enroll in MDTA programs or in an adult education program, or who return to a regular high school. Program administrators estimate that about 10% of program enrollees eventually get a high school diploma. Only 13 out of 1,336 students (1%) actually returned to high school during 1967-68.

A systematic scoring of the rationale and operation of this program with those elements which contribute to an effective vocational program reveals both program strengths and weaknesses.

One of the desirable academic elements found in this program is the small size of its general education classes, and this may be due as much to the poor holding power of the program as to good planning and management. The program is deficient in emphasizing more individualized programmed learning experiences. The fact that its academic courses are patterned after those in the regular classroom may help to explain why many enrollees remain in the program no longer than is legally required. For, without exception, these students are those who reject, or are rejected by, the regular high school. On the other hand, there are, as noted above, some imaginative and effective elements of the academic program for the student motivated enough to remain.

The vocational phase is also found wanting. Most seriously, there is no work experience program whereby the student earns income while learning on the job and receives credit for this experience. Also, the absence of a diploma or certificate of completion suggests the absence of a curriculum plan to upgrade the enrollee to a particular level. Instead, it might be charged that the program is, in fact, as the public sees it; i.e., just occupying the students until age 18.

The supportive services within the school appear adequate, but too little is done to relate the home situation and community setting of the student to the program. The placement of program enrollees in jobs related to their training is not seriously attempted, nor is a strong enough attempt made to help the student adjust to a job in the work world. An adequate testing program exists and excellent diagnostic counseling during the early weeks of the program is accomplished, but there is no extension of the school day or year to permit a student to work simultaneously toward a high school diploma and a vocational skill.

Administratively, the program is strong. There appear to be good teacher-principal relations, understanding attitudes toward the students (but not always positive expectations), and efforts at upgrading both the staff and the curriculum.

Neither of the two behavioral elements identified as part of an effective vocational program; i.e., high level of student achievement and low dropout rate can be said to exist in this program. The holding power of the program is unusally low, with two of every three enrollees dropping out over a period of one year. And, while creditable academic increments in reading and arithmetic were recorded for those students tested, not all the students were tested in this regard, nor were efforts made to measure the effectiveness of the vocational training offered by the program. It is almost as though a "Hawthorne Effect" is operable during the Diagnostic Quarter; i.e., the students, perhaps for the first time in school, receive unlimited attention and, as a consequence, show tremendous academic improvement. This phenomena soon disappears, however, when the spotlight is turned off and they slide back into previous behavioral patterns.

H. Comments

The overwhelming problems of the program are retention, sustained achievement, and attendance; the students are simply not available long enough and often enough to be given basic or vocational education.

Several suggestions can be made relative to these problems. First, the extension of team teaching beyond the diagnostic period, to the academic courses as planned may promise more effective results. Secondly, a cooperative work experience program should be established that would permit real-life work experience coupled with a wage stipend and more relevant classroom experiences. The practice of the program of attempting to interest and train largely alienated students with classroom experiences alone appears less than imaginative.

Moreover, a more positive philosophy for the program should be developed and advertised. Before coming to the school, students are warned that they are closing the door to good jobs and that they cannot hope to receive credit toward high school graduation for work done in this program. In other words, they are told to adjust to the regular high school or take their punishment. Apparently, a feeling of hopelessness accompanies a transfer. Students completing the diagnostic quarter were surveyed by the student newspaper last winter. One question asked was how they felt about their chances for employment when they reached 18. The newspaper reported: "They don't feel that they can get a good job. They feel they need a high school diploma."

The needs of youths demonstrating hostile, truant behavior are obviously not being met in the regular high school environment, but this does not mean that the alternative should be a year or two of attendance and work in a program not greatly different, save for the entry-level vocational training also obtained in the classroom. Also, there should be opportunities for those, so inclined, to obtain a high school diploma and, at the same time, develop a marketable vocational skill. As it is, the program gives no diploma of any kind.

Much of the present program is commendable. The school has a competent staff interested in using innovative approaches for dealing with this type of student. The importance of guidance and counseling is recognized. The approach used by the staff has been most effective during the diagnostic quarter. Thus, much of the methodology is excellent. What is needed is a way to keep the students long enough for them to benefit from the program. Strongly recommended is an intensive "outreach" program. Social workers should be hired to devote full-time to making home visits, involving the parents in the objectives and operation of the program, ascertaining basic causes of truancy and lack of purpose and motivation, and focusing the resources of the school and of the human development agencies of the city on these youngsters. Another effort should be directed toward follow-up studies of graduates. These studies are not only useful in evaluating programs, but they can become good public relations and school-employer liaison vehicles. The program should move from the defensive position of a holding action to positive and productive efforts to retain and reclaim these students.

A brief chart summarizing the data obtained and specific characteristics of Case Number 13 follows.

SUMMARY DATA: CASE NUMBER 13

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Large midwest inner-city
2. Type: Comprehensive
3. Kind of School: Special needs
4. Age of Program: Over 2 years
5. Enrollment: 1,336; Males 72 % Females 28 %
6. Average Age: 16.5 Grades Ungraded
7. Race/Ethnic: White 50 % Negro 50 % Spanish American ____ % Other (Oriental) - 1 %
8. Average Academic Retardation: 4 years
9. Family Income Under $3,000: 65 %
10. Primary Occupation of Heads of Household: Service; Blue Collar

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 16 Basic Education 21
2. S/I Ratio: Vocational ________ Basic Education ________
3. Diploma/Certificate: None awarded.
4. Number of Vocational Offerings: 5

III. TEST DATA

California Achievement Test		
	Pre-Test Score	Post-Test Score
Reading	5.9	6.5
Arithmetic	5.3	6.3

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 67 % Prior to Program **not applicable** **Regular School** ____ %
2. Follow-Up Data:

5% return rate on follow-up questionnaire.
10% eventually get a high school diploma.

V. COST DATA

1. Annual Cost/Student: $ 670
2. Cost/Student Hour: 63.8¢
3. Average Annual Starting Salary for Vocational Teachers: $7,039

CASE NUMBERS 15, 39 AND 40

A. General Description

These programs, centered in a large poverty community on the West Coast, are designed to provide psychological and social rehabilitation, as well as vocational education, to a student enrollment composed almost entirely of disadvantaged minority youth.

Despite its size (almost 200,000 population) and once-robust past, the community is in serious social and economic decline, serving as a port of entry to the influx of poverty populations into the industrial areas of the far West.

While there is a middle-class population in the area, the majority of the families are low income, live in substandard or rundown housing, have a low level of vocational skill, and are isolated from the larger community. The unemployment rate in the area is double that of the county, and it is estimated that two-thirds of the youth that reach seventh grade will drop out before obtaining a high school diploma. Area industries are predominantly marginal businesses such as wrecking yards and junk dealers, small shops, and a large number of liquor stores, pool halls, etc.

Cooperative vocational educational programming for the disadvantaged was introduced in 1966. However, in the course of program development, it was realized skill training alone would not meet the most critical needs of the disadvantaged students. The high degree of emotional and cultural deprivation among a high percentage of the students made psychological and social rehabilitation the fundamental goal of the program. In addition to skill training this vocational education program was used as a vehicle to meet these other needs.

With the elimination of economic hardships being the first concern of the community, the curricula in the three high schools are weighted heavily toward employment and employability training. Of a total of 6,400 students in the last school year, 1,600 were in vocational or industrial arts programs. It is expected that over 2,000 students will be enrolled in these programs in the coming year.

Another factor that contributes to the necessity for weighting the curricula toward employment related subjects is that many of the students need to work to remain in school and to help support their families. It is estimated that 70% of the boys and almost 50% of the girls in these schools need jobs, but are unemployed.

The program offers training and work experience in a great number of vocational areas, the most innovative of which appear to be the food services, distributive education, and the paramedical vocations. This report will concentrate on these three areas to show the inter-relationships between these and other segments of the total program, while observing the variations in vocational programming in three seemingly unrelated fields.

B. Student Characteristics

The average student is Negro, whose father, if at home and employed, is an unskilled or semi-skilled laborer. He lives in what would be a slum by standards in that county, but, unlike an eastern slum, the residence would be a single family dwelling with a lawn and a degree of privacy.

His neighbors are members of his own ethnic group, since there are few whites in the area and other minorities live in their own ghettos. He is a member of one of many youth gangs which abound in the area. There is also a chance he comes from a broken home, as an estimated 30% of the high school students are from broken homes.

A recent pupil analysis developed by the school district listed these characteristics common among area youth: lack of self and community pride, aggressive defensiveness, sense of isolation, and self-defeating behavior. About 10% of the student population is classified as mentally retarded. At the time the analysis was made, almost 2,000 students of a total enrollment of 7,000 in target area schools were found to be in the lower quartiles in I.Q. on the California Test of Mental Maturity (CTMM), in computed mental age/grade placement, and in reading achievement scores.

The need for vocational education in the district appears to be so great that some degree of screening and selection would seem to be justifiable. For example, acceptance into the distributive education program appears to have great status, requiring a "C" average, a record of good conduct, social skills, and successful completion of certain prerequisite courses. On the other hand, acceptance into the food services program is based primarily on the existence of an opening, there being no screening of enrollees. Presently, the reputation for these courses is so good that there are not enough openings available. School officials state that they categorically do not screen out potential enrollees in any courses.

C. Faculty and Staff

A quantitative breakdown of staff assignments and percentage of time spent on the various phases of the program is difficult to determine, especially since many of the vocational and academic classes are continued in the evening and on weekends in the system's adult education program. Generally, vocational staff must have seven years of experience in their trade. Thus, a teacher with only a high school diploma could be certified. In the food service program, all of the teachers have from 8 to 12 years industrial experience and several of them have bachelors degrees or are working toward bachelors degrees. For the paramedical courses, registered nurses with vocational certification are used. For distributive education, all teachers must have a bachelors degree in business education plus at least three years of teaching and two years of work experience. In summary, the teachers in this program are typical of the average teacher in this state in terms of education and experience requirements.

In staffing, unique aspects of the three programs include: team teaching-counselor teams of two persons, one male and one female, who have credentials in business, vocational education, and personnel administration. There are four such teams for an average enrollment of 120 students: two instructors hired specifically for the food services program are an ex-Navy cook and a home economist with cafeteria experience; the work experience portions of the paramedical courses are taught primarily in hospitals by certified hospital personnel. Teacher training in this program is given extensive support by the state through in-service training programs. More specifically, in the paramedical program, teachers received intensive pre-service and in-service training using hospital and school facilities. In the distributive education program, the teachers also received specialized training in retail sales and merchandizing. Teachers in the food services program do not receive additional specialized training, but were hired specifically for the program. One of the most unique features in this program is the requirement for teachers to work in industrial positions related to their specific curriculum area during the summer.

In reports submitted by vocational education instructors and coordinators, there is a discrete criticism of the academic teachers for failure to understand the nature and purposes of vocational education, and, in certain cases, for making no effort to relate academic material to the vocational interests of the students. This was especially true in the food services program where the teachers complained that the academic instructors failed to recognize that the kitchen and cafeteria work were actual laboratory experiences.

The vocational teachers themselves rate their courses, students, and progress very high, limiting criticism to lack of facilities and equipment.

The regular school standards of conduct and performance apply to the vocational teachers, with perhaps the exception of those in distributive education where the duties are broader and teachers are required to have unusual competence in fields such as public relations.

The teachers in this program are deeply involved in the community as well as in the affairs of the D. E. clubs.

This program has had some staff recruitment problems because of its proximity to a riot-torn area. However, salaries are slightly higher and the programs do appeal to the interests of applicants. There is good ethnic mix in the staff. Starting salaries are $8,000 for the teachers in paramedical, $7,000 in distributive education, and $6,100 in the food services program.

D. Curriculum and Scheduling

This is a two-year program divided into four semesters culminating in the award of a high school diploma. In some of the programs, like food services, the curriculum is weighted heavily toward academic work in the first and last semesters, while the paramedical concentrates on prerequisites before moving to the hospital setting in the last two semesters.

The most unique aspect of the curriculum is found in the food services section, but also touches on distributive education. One of the schools has a complete food service facility operated by the students themselves. It is a restaurant, kitchen and cafeteria, complete with its own purchasing and accounting departments. Office duties are performed by students from the office skills program, students in distributive education handle the business aspects in their field, and students from other specialized courses participate where appropriate.

The curriculum package for food services evolved from the FEAST training package (texts and manuals for students and teachers covering food service units such as menus, recipes, etc.) developed by the Ford Foundation. The medical curricula is currently being developed. It will incorporate exemplary elements of the FEAST package. For distributive education, one of the texts used is Principles of Marketing, Merchandising, Management. The work station concept based on actual work stations in industry is used. Audio-visual, perceptual, and learning machines are employed. Sales mathematics, personal grooming, and job attributes are stressed.

The teacher-counselor teams are available four hours each day; the total teacher-counselor time available is eight periods per day. In addition, a teacher is available for six hours each Saturday.

The food services program has an enrollment of 96 students, half of whom are males. With the exception of one Spanish-speaking student, all are Negro. In the first semester, students meet one hour daily for instruction in basic nutrition, menu and meal planning, principles of food preparation, and orientation to the work stations. In the second semester, students meet two hours daily to become familiar with food preparation in quantity through participation in operating the school snack bar, cafeteria, and the commercial kitchen. At this time, the student studies the skills required in each of the food service occupations, such as waitress, waiter, cook, fry cook and hostess. The first semester of the second year is devoted to job training, occupational information, use of commercial equipment, work simplification, storage and receiving. The final semester involves assignment to actual work experience of two hours or more per day for which credit is earned in addition to pay received from an employer. This includes extended specialized training in a restaurant or commercial kitchen and work-study participation by serving the preparing student breakfasts. Assignments and placements are made in accordance with achievement and ability.

The paramedical course, with an enrollment of 300 in the day school and 100 in the adult evening school, is divided into two parts. Nurses Aide I involves lecture, discussion, and demonstration with some laboratory work in first aid, safety, accident prevention and home care of the sick. The vocational part of the first semester (1 hour daily) leads to an American Red Cross home nursing certificate and the American Red Cross first aid certificate. The second semester (two hours daily) introduces the prospective nurses aide or orderly to the organization of a hospital, providing laboratory experience in caring for the hospitalized and convalescent patients and experience in planning patients' diets.

The second year serves either as a basis for further study and investigation or as job entry training. Instruction is job oriented. The second semester is divided into four tracks to provide opportunities for both terminal and college-bound students in several areas of the profession. Work experience is offered qualified students, most often to those in their second year.

The academic part of instruction for nurses aides or the paramedical professions, is integrated with academic instruction offered students in the other vocational specialities. For example, the mathematics course is generally applied to practical occupational problems. Where possible, course work is related to actual work conditions that will be faced by an individual regardless of specialty. The mathematics program for nurses aides is closely related to that of home economics, with emphasis on such problems as purchasing, payroll, taxes, and the preparation of receipts and stock requisitions. In much the same manner, the English course emphasizes communications skills as they relate to employment and problem solving in general.

As stated previously, the distributive education program is a selective, prestige course for the more qualified and job ready student. To qualify, the junior or senior must have "a pleasing attitude," good attendance record, a better than average grade in citizenship, an overall grade average of "C" or above, and three letters of recommendation from faculty members.

While the other vocational education students in this program fulfill their academic requirements through the "catch-all" courses like those described for nurses aides, there are special academic courses for the distributive education students. These include buying and selling goods, movement of goods and services from producer to consumer, controlling and directing business, and exploring various positions in the broad distribution field.

According to official work sheets, approximately 85% of the students were employed outside the school, and, quite possibly, the other 15% were employed in the school. The hours worked varied from 52 per week for two of the students (employees of a local taco stand) to 15 for trainees in a local bank.

The following are some observations and recommendations of the teachers:

1. Since office production and food services have a direct relationship, some minor problems of communication and articulation were evident. This was later resolved.

2. In the distributive education program, in addition to an increase in facilities and instructional supplies, there should be greater emphasis on speakers from the business world and many enrichment activities, the teachers express the need for more such activities.

3. In the paramedical field, the need was expressed for a central coordinator or director in the district for carrying out the program. This, it was felt, would solve some of the problems of equipment, facilities, and space.

4. In the paramedical services again, it is felt that more flexible scheduling is needed to give students maximum experience in the hospital; currently two hours is spent in the hospital and it is felt that three or four hours would be more desirable.

5. In all three areas, the general feeling was that the class loads in the specialized fields should be reduced while there should be more in-service training for all teachers in the vocational programs as well as teachers in the related subjects.

E. Administration

The program is administered by the school district, with the advice of community organization. In this state, the districts are responsible for coordinating activities among the various school programs, and exercise close control over quality and effectiveness. Consequently, the key personnel in these programs are the coordinators, situated at the district level, who are also on the guidance staff. Responsible to them, as well as to the principals of individual schools, are the teacher-coordinators who are directly involved with the students and employers. The individual vocational segments of the program are variably funded, then coordinated into a single program entity by the school district office.

F. Impact of the Program

At the time of the study, placement statistics were not available for the three program areas of distributive education, food service, and paramedical. However, the administration reported that there is no problem in placing a qualified graduate in any of the three fields, because of the high demand for these skills. Statistics available on the food services program indicated 95% were placed in training-related jobs upon completion, while the balance entered the armed services or married. A majority of the graduates stated they would continue training in food service management; A number said they would, and approximately 60% actually are advancing to junior college and college.

The dropout rate for the food services program in the 1967-68 academic year was 10%, with those leaving to marry or accept full-time work.

Pre and post-tests administered to the twelfth grade students in the food services showed inconclusive results. The post-test scores were fractionally lower on the average than the pre-test scores, which was partly explained by unfavorable circumstances in the administration of post-tests and the unavailability of many pre-test scores. An indication of progress is in grade averages of the students which were 1.9 in the tenth grade and 2.1 in the eleventh and twelfth grades.

The programs have generated a high degree of interest and participation in the community. In recruiting for the three programs, letters were sent to all parents, notifying them of the opportunities available.

Employed response to the programs is excellent. Several hundred employers in the county have responded with jobs, work experience stations, and service on various active advisory committees. The advisory committee on distributive education is especially excellent, with a large blue ribbon committee and affiliation with a national organization.

Employers cooperated in a formal grading program that checked a student's progress and they had regular consultation with guidance counselors. A good indication of impact is the anticipated 25% increase in program enrollment in the next school year. An aggressive development staff is organizing community support for additional funds and expansion of the program.

G. Qualitative Impressions

On-site visits and enthusiastic reports, not necessarily based on quantitative information, indicate that this program is highly successful. This is a prime example of vocational training of a so-called "special needs" group in a regular program, the philosophy being that everybody has special needs that can be met in a regular program.

In addition to being over-subscribed, it provides needed paid jobs to many students while in school; the necessary guidnace to develop initiative, pride, and ambition; and experience and placement in the spectrum of an occupation leading to college and professional status.

The development of academic curricula that have relevance to several vocational fields reflects an ability to "make do" with few teachers and large classes in the face of great demand for such academic courses. Many students outside the program also elect these courses.

The most tangible evidence of success is in the operation of the food service facility. An on-site inspection indicates that this facility is a special point of pride and psychological benefit to the students. The food service operation and morale are reported to be outstanding. The business practices are efficient and consistently sound in terms of cost accounting and productivity.

As a final note, much of the success of this program can be attributed to the continuing technical and financial assistance of a sound and sympathetic state Office of Education.

H. Comments

In the interest of encouraging the development and operation of similar programs for the severely disadvantaged on a mass basis, this program should generate more data and detailed reports of successful teaching techniques, occupational programming, and methodology. Above all, an evaluation mechanism is needed.

In view of the **extreme** pressure on program staff at this time, it may be unfair to recommend the addition of other functions and duties to the program. However, an ideal situation would include the addition of a follow-up program and services for the early dropouts and graduates with continuing problems.

Brief charts summarizing the data obtained and specific characteristics of Case Numbers 15, 39, and 40 follow. Number 15 is the food service program, 39 is the paramedical program, and 40 is the distributive education program. The test data for the three programs are judged to be unreliable.

SUMMARY DATA: CASE NUMBER 15

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: West; Large City Suburban

2. Type: Vocational Education

3. Kind of School: Comprehensive

4. Age of Program: Over 2 years

5. Enrollment: 96 ; Males 50 % Females 50 %

6. Average Age: 17-18 Grades 11-12

7. Race/Ethnic: White ____ % Negro 99 % Spanish American 1 % Other ____ %

8. Average Academic Retardation: 2 years

9. Family Income Under $3,000: 20 %

10. Primary Occupation of Heads of Household: Blue Collar; Service

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 24 Basic Education 35

2. S/I Ratio: Vocational ____ Basic Education ____

3. Diploma/Certificate: Regular High School Diploma

4. Number of Vocational Offerings: Food Services Program

III. TEST DATA

	Pre-Test SAT		Post-Test SAT (SERD)	
	Reading	Arithmetic	Reading	Arithmetic
Grade	8.4	8.4	12	12
N	19	17	19	17
Score	7.1	6.9	6.9	6.5

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 10 % Prior to Program 46 % Regular School 23 %

2. Follow-Up Data:

95% placed on training related jobs.
60% pursuing some post-graduate training.

V. COST DATA

1. Annual Cost/Student: $597.00

2. Cost/Student Hour: ____

3. Average Annual Starting Salary for Vocational Teachers: $6,100

SUMMARY DATA: CASE NUMBER 39

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: West; Large City Suburban
2. Type: Vocational Education
3. Kind of School: Comprehensive
4. Age of Program: Over two years
5. Enrollment: 200 ; Males 10% Females 90%
6. Average Age: 16-17 Grades 11-12
7. Race/Ethnic: White 21 % Negro 49 % Spanish American 30 % Other ___ %
8. Average Academic Retardation: 2 years
9. Family Income Under $3,000: 40 %
10. Primary Occupation of Heads of Household: Blue Collar; Service

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 24 Basic Education 35
2. S/I Ratio: Vocational ___ Basic Education ___
3. Diploma/Certificate: Regular High School Diploma
4. Number of Vocational Offerings: Paramedical Program

III. TEST DATA

	Pre-Test SAT		Post-Test SAT (SERD)	
	Reading	Arithmetic	Reading	Arithmetic
Grade	9.1	9.1	12	12
N	13	12	13	12
Score	7.9	8.4	7.5	8.2

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 2 % Prior to Program 46 % Regular School 23 %
2. Follow-Up Data:

Not Available

V. COST DATA

1. Annual Cost/Student: $ 667.00
2. Cost/Student Hour: ___
3. Average Annual Starting Salary for Vocational Teachers: $ 6,100

SUMMARY DATA: CASE NUMBER 40

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: West; Large City Suburban
2. Type: Vocational Education
3. Kind of School: Comprehensive
4. Age of Program: Over two years
5. Enrollment: 111 ; Males 50 % Females 50%
6. Average Age: 16-17 Grades 11-12
7. Race/Ethnic: White 8 % Negro 83 % Spanish American ____% Other 9 %
8. Average Academic Retardation: 2 years
9. Family Income Under $3,000: 20 %
10. Primary Occupation of Heads of Household: Service

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 24 Basic Education 35
2. S/I Ratio: Vocational ____ Basic Education ____
3. Diploma/Certificate: Regular High School Diploma
4. Number of Vocational Offerings: Distributive Education Program

III. TEST DATA

	Pre-Test SAT		Post-Test SAT (SERD)	
	Reading	Arithmetic	Reading	Arithmetic
Grade	8.9	8.9	12	12
N	17	9	17	9
Score	7.5	7.4	6.7	6.7

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 1 % Prior to Program 46 % Regular School 23 %
2. Follow-Up Data:

Not Available

V. COST DATA

1. Annual Cost/Student: $592.00
2. Cost/Student Hour: ____
3. Average Annual Starting Salary for Vocational Teachers: $6,100

CASE NUMBER 16

A. General Description

This program was designed specifically for ninth graders of a suburban junior high school near a large northeastern city, who have experienced difficulty with the academic curriculum, but have demonstrated interest in work experience. This was believed to be the only pre-vocational work study program offered in a junior high school.

The 36 boys and seven girls in the program were recruited from the eighth grade classes of the junior high school. A team teaching approach used in the program attempted to integrate academic courses and values into the practical work training and experience that are understandable and attractive to the students.

Emphasis was placed on curriculum enrichment, with such projects as field trips, guest speakers, social activities, and publication of the first school newspaper.

Rather than casting a ninth grader into a particular vocation or pattern, the program was conceived to assist the non-academic student in relating his personal interest to an academic curriculum and, thereby, enhance his chances and motivation for remaining in high school.

B. Student Characteristics

The 36 boys and seven girls identified as potential dropouts and invited to enroll in the program were ready to enter the ninth grade at their junior high school. Their demographic and socio-economic characteristics reflect those of the 685 regular students and the community served by the school. Only one student is known to be from a welfare family; eight are Negroes. The majority of the students are from lower middle-class families. The parents of the students in this program are primarily service and blue collar workers, while parents of students in the regular school program are evenly distributed between blue collar, service, and white collar. Student I.Q.'s are somewhat below average, but five have I.Q.'s below 75. The students, on the average, read and do arithmetic on a fifth grade level.

C. Faculty and Staff

The faculty and staff are drawn from the regular schools. The regular staff includes five "team" teachers, one guidance counselor, one paraprofessional, a secretary, and non-professional consultants. One of the teachers served as project coordinator. Four teachers assisted on special projects in art, business education, and industrial arts.

Here are some brief profiles of the personnel involved:

--the English teacher is a former airline stewardess with four years of experience and a BA from a university with education courses.

--the chairman of the math department has a BS in mechanical engineering, an MS in physical education, one year of college teaching experience, four years as a private school teacher of math and science, and two years at the present job.

--the social studies chairman has eight years teaching experience and a BS in education.

--the chairman of industrial arts has 25 years teaching experience and a BS in Industrial Arts. He is completing a thesis for an MA degree.

D. Curriculum and Scheduling

The program covers a full school day, with classwork in the morning and work experience in the afternoon. In general, the program includes both individual and small group instruction, as well as cultural and curriculum enrichment projects.

The academic classes are limited to groups of about 10, under the general categories of math, social studies, and English. However, the team teaching approach is used to relate the traditional course work to the practical or everyday experiences in which the students are interested. Multi-media materials are used extensively. For example, math is related to work experience: filling out income tax forms, etc. The communications arts are related to job search, employer relations, and basic social skills. The vocational part of the curriculum is limited to general shops, drafting, and home economics. Work experience is obtained in a variety of settings including a hospital, dental office, department store, restaurant, bakeshop, snack bar, and the school library. The facilities used in the operation of the program include a metal shop, a wood shop, a mechanical drawing room, a library, and three regular classrooms.

Curricula guidelines for reading include:

> The general objectives for reading involve promotion of word-consciousness as a means toward broadening working and recognition vocabulary and improving spelling, vocabulary building through examination of words in context, development of skills that aid in reading comprehension, increased understanding of varied purposes of writers, and increased appreciation for various types of literature.
>
> The basic approach involves careful previewing and follow-up of independent reading assignments to stimulate and maintain interest and to aid in and evaluate comprehension, frequent oral reading employed to stimulate interest and to insure careful consideration of the meaning and pronunciation of new words and determine particular reading levels.
>
> Newspapers and magazines should be used to provide a means of relating reading to practical experience and of correlating English assignments with such subjects as civics and industrial arts.

Adapted versions of literary classics should not be overlooked in the important attempts to encourage and develop reading beyond the strictly practical sphere.

E. Administration

The program is administered as a special project within the framework of the regular junior high school. The coordinator reports directly to the principal. Faculty assigned to the coordinator consists of those who expressed a special interest in the program.

The para-professional serves as a "teacher's aide" and reports to the coordinator.

F. Impact of the Program

Although the ultimate success of the program in carrying out its goals will be judged by its impact on the students several years hence, the operation of the program has progressed according to plan. Uniquely situated in a junior high school, the project cannot be evaluated as a vocational education program per se. There is also some question of whether this program is to be classified as "pre-vocational" or as a special effort toward motivation and enrichment for under-achievers.

Dropout statistics emanating from this program are irrelevant, since this age group is subject to compulsory school laws. Job placement figures, while indicating success in finding experience opportunities for the students, cannot be defined as job placements or as a part of vocational preparation. Rather than treating a serious problem, this program attempts to anticipate a possible problem and take preventive measures. It could be said that the students identified and recruited for the program were potential dropouts and may one day join the ranks of the unemployed and the poverty population.

The criteria then, on which the impact of this program could be determined was in the reactions and attitudes of the students themselves. Indications are that enthusiasm for this kind of program among the students involved was very high. Students we interviewed showed a liking for the program and a desire to remain in the program. Three of the students who went on to senior high school demanded that their afternoon work experience program be continued, and the request was granted.

As stated before, the real proof of success in this program will be in the attitudes and achievements of the students as they move on through higher grades.

G. Qualitative Impressions

In considering the critical problems posed in this study, it is tempting to call this project a "luxury." The students are neither dropouts nor from poverty homes. This is not a criticism, necessarily, since the community served by the program is almost entirely middle-class.

The work-experience phase was designed to acquaint all the students with work environment, rather than training for a specific skilled vocation. This is good in that the work-experience does serve to polarize the student in a particular vocational choice at an early age, but does provide an opportunity to test skills and vocational preferences.

Much test data was obtained in the course of the program (results of the Metropolitan Achievement Test-Elementary Battery are in the Summary Data Chart at the end of this case) but, the tests showed no significant gains.

The enrichment program and the team teaching approach appear to be imaginative. These contributed to making the educational experience interesting and related to the lives and ambitions of the students. At every opportunity, academic content was related to preparation for work, for self-reliance, and for taking a place in society. However, there are more than several definitions of what educational programming should be that encompass these techniques.

The small classes, the individual attention, the enthusiasm on the part of both students and teachers, and the involvement of business and the community added much to the value of this experience.

In summary, it is feasible to provide work-study experience to this age group.

H. Comments

A meaningful evaluation of the program, as presently conceived, can be made only after these students enter high school and plans should be made for such a follow-through study. One meeting for parents of these students was carefully planned during the last academic year, but only one out of 70 parents attended. The program could be improved through home visits, and other, more effective, contacts with the parents.

A brief chart summarizing the data obtained and specific characteristics of Case Number 16 follows.

SUMMARY DATA: CASE NUMBER 16

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Northeastern City - Suburban
2. Type: Pre-vocational
3. Kind of School: Comprehensive
4. Age of Program: 1-2 years
5. Enrollment: 43 ; Males 84 % Females 16%
6. Average Age: ____ Grades 9
7. Race/Ethnic: White 80% Negro 20% Spanish American ____% Other ____%
8. Average Academic Retardation: ______ years
9. Family Income Under $3,000: ____%
10. Primary Occupation of Heads of Household: Service; Blue Collar

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 10 Basic Education 10
2. S/I Ratio: Vocational 10/1 Basic Education 10/1
3. Diploma/Certificate: ____
4. Number of Vocational Offerings: Pre-Voc. (general shops, drafting & home economics)

III. TEST DATA

	Metropolitan Achievement Test				SAT(SERD)	
	Reading		Arithmetic			
	Pre-Test	Post-Test	Pre-Test	Past-Test	Reading	Arithmetic
Grade or Date	9/67	9/68	9/67	9/68	9	9
N	23	23	23	23	23	23
Score	5.4	5.8	5.4	5.8	5.6	5.3

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 ____% Prior to Program ____% Regular School ____%
2. Follow-Up Data:

V. COST DATA

1. Annual Cost/Student: $______
2. Cost/Student Hour: ______
3. Average Annual Starting Salary for Vocational Teachers: $______

CASE NUMBER 19

A. General Description

The Work Opportunity Center of a large city in the Upper Midwest has, since September 1966, attempted to serve the specialized needs of students who find it difficult to succeed in established secondary educational programs. The announced purpose of the program is to provide whatever service a youth between the ages of 16 and 21 may need to become self-reliant in the community. These services include vocational training, vocational guidance and counseling, work experience, testing, work attitude orientation, basic education, job development, placement, and follow-up. The program is supported by a variety of outreach services in cooperation with indigenous advisory groups, the Department of Welfare, the courts, the public school system, and other agencies.

As originally designed, the program emphasizes individualized service and short-term results while experimenting with certain adjustments in the more traditional practices in secondary education in order to attract and retain hard-core youth. Accordingly, the facility is located in a "non-school" type building in the center of the depressed area. The program is non-graded, emphasis is placed on success of the individual, there is an open attitude toward dress and behavior (there is an area set aside for smokers), hours are flexible, and non-attendance is tolerated as well as treated.

An attempt is made to relate skill training and on-the-job experience to the job market. Therefore, this part of the curriculum is flexible with courses in specialized skills added or dropped as the situation demands.

The program is open to any city youth not enrolled in high school. Again, since the program is tailored to individual needs and rate of progress, enrollment at a given time varies between 250 and 300 students. From 12 to 18 students enter the program each week, and an estimated 1,000 students are served by the program during a 12-month period.

B. Student Characteristics

Although there is a school system regulation against racial classification of students, it is estimated that 18% of the program enrollees are Negro, which is a relatively high ratio for a community with a small minority population. However, there is a lack of proportionate enrollment of American Indian students, although American Indians represent a sizable poverty community in this city.

If generalizations can be drawn from a recent sampling, indications are that most of the students have limited, short-term educational objectives. The same sampling showed most enrollees are early high school dropouts with an average of 6.4 earned credits. Most enrollees have changed homes at least three times and schools five times, with some changing as many as 12 times. Almost half the enrollees sampled came from broken homes or were living with relatives other than their parents. The Otis I.Q. scores range between 61 and 121.

During the 1967-68 school year, 12% of the enrollees were employed full-time and 27% were employed part-time. Significantly, 25% of the minority group members in the sample withdrew from the program before completion.

Reasons for withdrawal from the program, in order, were: lack of interest, placed on job, non-attendance, marriage, military service, and leaving town.

In May 1968, 40% of the enrollment was female and 60% male. A total of 14 girls were pregnant, five of the 254 enrollees had been expelled from other high schools, 71 were court appointed, 35 had criminal records, and 150 were classed as "delinquents" because of non-attendance at other schools. Some 55% of the enrollees were from families with incomes of less than $3,000 per year. Over 40% required medical attention, while it is estimated that 10% had severe emotional problems.

C. Faculty and Staff

The program employs 51 professional and ancillary people, including three counselors, five social workers, a nurse, a psychologist, a curriculum development specialist, and four project specialists.

The project includes an accelerated in-service training program for faculty. Meetings are held twice each week to discuss and investigate teaching strategies, research findings, and special problems peculiar to the project. All faculty members are certified and their median salary is $11,000 per year, which includes summer.

In general, effort has been directed toward creation of an environment of flexible experimentation to encourage development of new methods and new curriculum to reach reluctant learners. The teachers are selected for the program through an internal screening process. Since higher pay and additional status are offered by the program, it is especially attractive to the more ambitious teachers. The regular school system has made all teachers available for recruitment into this program. Therefore, the program has sought to obtain the best.

Among the criteria used are peer attitude evaluations of teacher candidates and intangibles, such as the attitudes expressed by the teachers themselves.

D. Curriculum and Scheduling

In this climate, it is difficult to differentiate between curriculum and service, since the problematic nature of the enrollees makes the two interrelated. Therefore, in a presentation of a laundry list of course work in this metropolitan center, it must be remembered that emphasis and degree of intensity for each course of skilled training and developmental work will vary from student to student. In general, then, course work can be divided between some 20 skill training categories or vocations, developmental work in reading, arithmetic, communication skills, social studies, individualized academic courses, and follow-through training services.

Some of the departures from established curriculum attempted by the program include increased emphasis on events and involvement in activities outside the classroom, including field trips to plays and exhibits, restaurants, and other work stations. In several skilled training areas, an incentive system has been developed utilizing rating sheets, awards of merit, point systems, etc.

There seems to be divided opinion as to the relative merits of group teaching as opposed to individualized attention. Some research material indicates that students experience greater success or progress in the group situation, because of shared experience and inter-personal group dynamics. However, the low student/instructor ratio is the major variable.

As stated previously, the schedules are flexible in accordance with the needs of individual enrollees. Most of the students (70%) prefer their course work in daylight hours. The program has continued through the summer and the staff considers the retention rate of 54% to be unusually high. The details are vague, but there are provisions in certain cases, where credits earned in the program can be applied toward a diploma through the transfer of credits to an established secondary school.

There are no real innovations in the program. Rather, the strength of the program seems to lie in doing a more comprehensive job with conventional techniques in a low student-teacher ratio situation (6:1). At the same time, all necessary equipment is available and fully utilized in the classroom. It includes tape recorders, video tapes, language laboratories, and other equipment.

A large number of texts are available in almost every classroom, but the teaching is not geared to any one test. The teachers select the reading material according to individual interests and abilities.

E. Administration and Funding

The program is funded by the public school system as a project of the local community action agency and the U. S. Office of Education. The program has a full-time project director and project staff.

F. Impact of Program

While many aspects of the program operation are commendable, there is an aura of "pilot project" and "experiment" about it that has given it a dubious distinction in the community. The program has been well-received and publicized, but as something for "the other people," which is reflected in the recruitment problems of the project. While the project does have outreach aspects and cooperative arrangements with other agencies, the only effective recruitment seems to be done by the students themselves. This type of referral accounts for almost 70% of the enrollment. This image of the project also seems to be reflected in the attitude of the students. A sampling showed that a large majority had little regard for their abilities and recognized that their futures were limited.

The vocations for which skill training is offered at the center are in line with the needs of the local job market, yet they reflect the limited opportunities that the community is willing to provide the enrollees. The conclusion is that such a program, for all of its good intentions and positive aspects, performs a limited service of limited impact.

Primarily, it attracts enrollees who had accepted failure, but are motivated to work in a field that requires minimal skills. The criterion for completion of the course as reflected in the dropout studies, is "skill readiness" as opposed to academic readiness or achievement that prepares a youth for a lifetime of self-reliance and citizenship.

The problem is further intensified in this city because it is an industrial area with a high skill, high income job market. While providing the community with entry level applicants for certain minimal-skill jobs, projects like these are doing little to bring the disadvantaged into the greater job market and the general community.

There are many reports on the learning experience of the staff and a few on the learning experience of the students. In an effort to check progress in academic achievement through the program, post-tests, comparable to pre-tests made before the program began, were administered.

Comparability in the two tests given in a period spanning more than three years, was achieved among 28 students. The average school grade of the students given the pre-test was 8.1. The average post-test grade was 11.2 in the reading test. The pre-test average score was 5.7 and the post-test score was 8.8, indicating that the students remained three years academically retarded, but did progress almost three grade levels.

Comparison of pre and post-tests in arithmetic showed less positive results. The pre-test average grade year was 7.9; the post-test average was 11.2. The pre-test average score was 6.4, but the post-test, administered by the study, was only 6.6.

G. Qualitative Impressions

The program definitely serves dropouts, since being a dropout is a qualification for enrollment with a high percentage of the students economically disadvantaged with special problems.

The only weakness of this particular project lies in the basic conceptual development of the program rather than at the teaching level where a high degree of competence and ingenuity are shown. As the program is operating , the enrollees are "dropping in" with a low level of expectation and soon drop out without having raised that level of expectation. It will be interesting to see what becomes of these short-term, skill-trained graduates as the job market becomes even more sophisticated.

In general, we can say that the goals that are being set for the program by the community and the project are being carried out in a competent manner by a competent staff. However, it is these goals and the attitudes behind them that are open to question.

H. Comments

This community needs to take a fresh look at its work experience program in terms of the real opportunity it provides the disadvantaged individual, as opposed to serving the short-term skill needs of the community. The outreach effort should be expanded to embrace a greater number of those who are not motivated to enroll on their own volition.

A brief chart summarizing the data obtained and specific characteristics of Case Number 19 follows.

SUMMARY DATA: CASE NUMBER 19

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Midwestern: Large City
2. Type: Vocational Education
3. Kind of School: Full vocational education
4. Age of Program: over 2 years
5. Enrollment: 250-300 ; Males 60 % Females 40%
6. Average Age: 16-21 Grades 9-12
7. Race/Ethnic: White 79 % Negro 18% Spanish American ____% Other 3%
8. Average Academic Retardation: 3 years
9. Family Income Under $3,000: 55%
10. Primary Occupation of Heads of Household: Blue Collar

II. INSTRUCTIONAL DATA

1. Class Size: Vocational ____________ Basic Education ____________
2. S/I Ratio: Vocational 6-1 Basic Education 6-1
3. Diploma/Certificate: Regular High School Diploma
4. Number of Vocational Offerings: 20

III. TEST DATA

	Pre-Test				Post-Test			
	Test Used	Grade	N	Score	Test Used	Grade	N	Score
Reading	GSGO	8.1	28	5.7	GSGO SAT(SERD)	11.2 11.2	28 28	8.8 7.3
Arithmetic	UNK.	8.0	28	6.4	SAT(SERD)	11.2	28	6.6

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 ____% Prior to Program ____% Regular School ____%
2. Follow-Up Data:
   12% were employed full-time;
   27% were employed part-time in training related jobs.

V. COST DATA

1. Annual Cost/Student: $________ 2. Cost/Student Hour: ________
3. Average Annual Starting Salary for Vocational Teachers: $11,000

CASE NUMBER 25

A. General Description

This project, located in a suburban community on the northeast coast, represents an effort to encourage dropouts and potential dropouts to prepare for high school equivalency and employment with the aid of intensive counseling and remediation.

Dropouts were actively sought for enrollment by regular school counselors, but, as it worked out, enrollment consisted predominantly of those classified as "potential dropouts."

Enrollment varies from 30-60 students at a given time. Classes are conducted after regular school hours. Since this program is an adjunct of the regular school curriculum, admission is voluntary and a regular high school program is offered in addition to a certificate of completion.

When the school opened in September 1967, 400 potential enrollees were identified, 200 of whom were contacted. Of these, 132 were interviewed and 94 attended one or more class sessions.

Thus, students often use the program to go to a job, then drop. However, job placement services are provided. Those students interested in immediate employment are referred to the State Employment Service, the Division of Vocational Rehabilitation, and the Veterans Administration.

B. Student Characteristics

The student body is considered representative of a cross section of dropouts and potential dropouts, ages 16-21, in the area. Of the 135 students who attended one or more classes during the 1967-68 school year, 60% were male, and 40% were female; 12% were Negro, and a few were Spanish-speaking, three of whom spoke little or no English.

The students are predominantly at the tenth and eleventh grade levels, with the average student retarded three years academically. It is estimated that one-half of the student body come from poverty homes. The students represented a variety of problems including pregnancy, criminal and narcotics records, and expulsion from other schools.

C. Faculty and Staff

Faculty members are employed full-time in other areas of the school system and paid on an hourly scale computed on the basis of their regular salary. Average annual salary for the faculty members is $7,000 per year.

With the opportunity to earn over and above the regular salary through teaching in this extra-hours program, the director has the opportunity to select some of the best faculty members.

In addition, the nearly 1:1 student-teacher ratio provides the more dedicated and imaginative teachers in the system an opportunity to key their efforts more closely to the needs of the individual students.

There were no qualified opinions made as to the relationship of effectiveness to the extra hours put in by the teachers, although it is felt that the extra hours do not adversely affect the more dynamic and ambitious teachers.

Teachers are hired in accordance with state requirements which include a bachelors degree with approved courses from a recognized college or university. In addition, all specialized teachers must have experience in their special field. All candidates must pass written, oral, and medical examinations given by the state board of examiners.

D. Curriculum and Scheduling

This special school is operated in the late afternoon and evening after regular school hours. While the academic and vocational content cannot be distinguished from the vocational school, the difference lies in structure and operation. The program is highly individualized, geared to the specific needs of individual enrollees. For example, babysitting services are arranged and one student has been allowed to bring her child to class. A special class in English was developed for three Spanish-speaking enrollees. The atmosphere is informal. The students are treated as adults. They are allowed to dress as they wish and have full use of the smoking lounge and other adult facilities. This freedom resulted in self-imposed constraints on behavior.

Vocational classes are conducted in auto mechanics, data processing, typing, shorthand, electricity, graphic arts, and woodworking. In addition, group lectures and sessions are conducted on such topics as attitudes toward employment, social responsibility, marriage, and personal health. Films and other communications aids were used.

As a part of the effort to make the program "non-school" and comfortable for the enrollees, no achievement or intelligence tests are administered, so these data are not available for evaluation.

In the formal sturcture, vocational classes have a student-teacher ratio of 5 to 1, while the ratio in the academic program is 2 to 1. However, with a shifting enrollment, actual ratios are lower. Since the low student-teacher ratio is keyed to the needs of individual students, the multi-text approach is used in carrying out this project. In addition, advanced supplemental and enrichment materials are used, including the SRA reading and math programs, and the Sullivan Series for remediation.

E. Administration

This program operates as an adjunct of an established vocational school with the assistance of Title III ESEA funds. The per-pupil cost of the program is estimated to be $350 per year, but the personalized teaching-counseling situation and part-time nature of the project brings the cost per student hour near $10. (The regular high school costs in the district are approximately $1,000 per year per student.)

F. Impact of the Program

School authorities consider the program highly successful, and plans are being made to continue the special school after federal funds expire.

The most striking achievement of the program is in the number of permanent work placements. These placements totaled 37 out of an average student population of 60. The project claims to have assisted most of the students in returning to regular curriculum, passing high school equivalency tests or adjusting their attitudes with regard to academic achievement. Instructors said that the stated goal of most enrollees was to receive a diploma.

The informal nature of the program limited the collection of data. However, indications are that the dropout rate is approximately 35%. A major factor in this rate is the fact that students, once they get jobs, leave the program.

On the research side, the most interesting development was the emergence of a need for more structure in the program. This is apparently desired by the enrollees. With the absence of constraint, students either begin to demand structure and/or impose their own. In this case, the structure they imposed was positive, e.g., adult-type behavior.

G. Qualitative Impressions

Since this program borders on being a highly personalized, tutorial arm of an established vocational school, it again proves the effectiveness of close personal services in dealing with the problems of potential dropouts and disadvantaged youth. While records and other means of measuring the progress and effectiveness of the program are lacking, it is apparent that the program is carried out with dedication and achieved results, perhaps because the informal situation and low student-teacher ratio gives the faculty an opportunity to perform under ideal circumstances. At the same time, this program opens the question of whether or not the results achieved would have been equalled by the regular school program through the provision of more personalized services.

In a sense, the results justify the cost, but in future planning the program will have to face up to fiscal realities. The opportunity to expend almost $10 per student hour in a public program is extremely fortunate. However, it must be recognized, realistically, that this cannot go on forever, and that such a costly program cannot be expanded on the present basis to serve a larger number of disadvantaged.

H. Comments

While the results of this program are commendable, a way must be found to achieve the same results at a reduced cost so that the program can continue and be expanded to serve additional students. This will require cultivation of teaching and counseling techniques to increase time-cost effectiveness. The informal nature of the program must be modified to the point where some information on achievement, progress, and effectiveness can be collected. Currently, such information is not available.

A brief chart summarizing the data obtained and specific characteristics of Case Number 25 follows.

SUMMARY DATA: CASE NUMBER 25.

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Northeast; Large City-Suburban 2. Type: Work-Study, Vocational Education

3. Kind of School: Comprehensive w/Voc. Training 4. Age of Program: 7 mos. - 1 year

5. Enrollment: 135 ; Males 60% Females 40% 6. Average Age: 16-21 Grades 10-12

7. Race/Ethnic: White 85% Negro 12% Spanish American 3% Other ___%

8. Average Academic Retardation: 3 years 9. Family Income Under $3,000: 50%

10. Primary Occupation of Heads of Household: Unemployed

II. INSTRUCTIONAL DATA

1. Class Size: Vocational ___ Basic Education ___

2. S/I Ratio: Vocational 5/1 Basic Education 2/1

3. Diploma/Certificate: Regular High School Diploma and Certificate of Completion

4. Number of Vocational Offerings: 7

III. TEST DATA

Not available

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 35% Prior to Program ___% Regular School ___%

2. Follow-Up Data:

Not available

V. COST DATA

1. Annual Cost/Student: $350 2. Cost/Student Hour: $10.00

3. Average Annual Starting Salary for Vocational Teachers: $ 6,600

CASE NUMBERS 34 and 35

Case Numbers 34 and 35 are two vocational schools selected for study from a large number of such schools in a major metropolitan area on the eastern seaboard. These particular schools were selected because of the nature of the population they serve, their location in the deteriorated central city, a general reputation for quality programs, and an "open door" to the disadvantaged. Case Number 34 is a girl's vocational school and 35 is a boy's school.

These two vocational high schools are regular, traditional large inner-city schools. They aim at social, economic, cultural, and physical development. Terminal courses are offered which prepare for occupations in the industrial and commercial fields and in the service trades.

Each of these programs has been in existence for more than two years and is part of a vocational high school system. The system defines the curriculum and class schedule. These two vocational high schools conduct classes six hours per day. Three hours are devoted to the practical work of the vocational subject selected by the student. The remainder of the day is devoted to mathematics; science and other related subjects; and English, social studies, health education or music.

The schools offer certificates to students with satisfactory citizenship, but who have not satisfactorily completed a prescribed vocational curriculum, a city vocational diploma for those who satisfactorily complete the course, specialized diplomas for completion of particular areas of study and two types of regular high school diplomas. The vocational-industrial diploma, which is of particular interest here, requires completion of units in English, social studies, science, mathematics, health education, physical education, music appreciation and art, in addition to a three-year sequence in industrial subjects.

Within the constraints of general regulation by the system, each school makes adaptations and adjustments for its particular needs or goals.

CASE NUMBER 34

A. General Description

This is a vocational high school for girls with an enrollment of 1,100 pupils. The school is presently in a period of transition from the traditional concept of a trade school to a more progressive concept of a vocational education school. This stage is seen as a part of a larger transition to the ultimate goal of a comprehensive high school. In other words, the long range objective is to serve the needs of the students by providing skilled trade courses within the framework of a comprehensive high school academic curriculum. In this evaluation, attention was focused on health careers.

B. Student Characteristics

This school draws its pupil population from the entire city. The student population is comprised of 62% Negro, 36% Spanish-speaking, and 2% white Predominant enrollment is in the health careers program. This is generally attributed to the belief on the part of the students that there is no color barrier to employment in this field. Of the total enrollment, 97% of the students can be classified as disadvantaged; not less than 65% come from families with less than $3,000 per year income. In addition to the economic disadvantage, there is substantial disadvantage in culture and language.

The screening process for enrollment does eliminate the mentally retarded, but in all other ways, the school is recognized as having an open enrollment policy. It accepts students expelled from other schools, court referrals, and students with criminal records.

C. Faculty and Staff

The faculty is composed of teachers employed by the total school system. As such, salary scales conform to the scale for that city---starting salaries of $6,600 per year, with annual increments to $11,000 at the end of ten year's service. As part of a total system, teachers are not recruited specifically for this program nor are they given special training.

The total staff for this school is composed of approximately 93 individuals, 81 of whom are teachers. These include 43 vocational teachers, 15 teachers of related subjects, and 21 academic teachers. In addition, the staff includes two education and vocational counselors and one health counselor. Two full-time and one half-time teacher also are engaged in counseling activities.

Teachers are hired in accordance with state requirements which include a bachelor's degree with approved courses from a recognized college or university. In addition, all specialized teachers must have previous experience. All candidates must pass written, oral, and medical examinations given by the state board of examiners. The teachers in this program are typical of those in other city schools, e.g., senior staff is predominately white, career patterns are well established, and experience factors in dealing with unruly disadvantaged are higher.

D. Curriculum and Scheduling

As stated, the school day is of six hours duration equally divided between vocational training and academic courses. It offers a full three-year high school program with training in cosmetology, fashion art, cafeteria training, and health careers which include practical nursing and nurse's aide training. A special effort is made by the staff to relate the academic content to the vocational training. The vocational classes average 25 students, and the academic classes 34 students.

The cosmetology students study for three years toward a state license. Due to the fact that Negro job applicants have been meeting resistance in beauty shops, they are not entering this course.

The fashion art students work on standard and special machines used in the needle trade. The students are exposed to all aspects of garment manufacturing and are encouraged to try creative ideas in which they design and assemble garments. One student recently won a local competition in dress designing.

The cafeteria course is for one year and leads to restaurant positions in cooking and/or serving.

The health careers program can be seen as a beginning cluster program with a dual path for the entering student. The course offered leads to a practical nursing, a licensed vocational nurse, or a nurse's aide rating. Actual work-study programs have been coordinated with hospitals, health clinics, and child care centers. Curricula content generally complies with standards set by professional hospital, medical, and nurse's association. For the LVN program, the material is keyed to passing the state certification examination.

Emphasis, however, is on the academic courses, which include: three and one-half years of social studies, world geography in the ninth grade, world history in the eleventh, American history and world backgrounds in the twelfth year. The four-year English course includes a semester of speech instruction. Select students receive instruction in Spanish. Special subjects include physical education, general music, choral music, and piano. A varied program of extra-curricular programs and activities is offered including publications, sports clubs, human relations, drama and affiliation with religious organizations.

For purposes of this study, the achievement of students in the health careers field was intensively studied.

E. Administration

The administration conforms to the pattern set for it by the large city high school system, so there are no unique or unusual aspects in this element of program operation.

The annual cost per student is stated to be $1,470 which compares to a cost of $1,074 for a student in non-vocational high school programs.

In this particular system, vocational high school diplomas are awarded. In addition, students may take an examination for a regular high school diploma. Approximately 25% of the students elect to take such examinations; about 40% of those taking the exams pass them and receive the additional diploma.

F. Impact of the Program

Operating within the standards of a major city board of education, this school gives an impression of dedication and warmth which is outstanding in comparison to other large city schools surveyed in the same city.

Most students demonstrated improvement in motivation, personal drive, sense of work, reading scores, participation in school activities and other related activities. The courses given expose the students to more than vocational education and direct their efforts toward general education and life.

G. Qualitative Impressions

Some of the standards of the school system appear to screen out the most disadvantaged students. However, from among those students who are admitted, this school serves the most seriously disadvantaged. No information was available concerning dropout rates for the current year. The impression is that the school has considerable retention power.

The school has been effective in the placement of its students, particularly in the health careers program. One reason may be a work-study program which provides part-time work for seniors. The records indicate that all of the graduates of the health careers program who want jobs are placed. Some of the students, about 10%, elect to go on to higher education. Hard data was not available on placement and follow-up in the health fields.

On the basis of the Metropolitan Achievement Test in reading, the consolidated scores for all three grades indicate a change of (plus) 2.1 between pre-testing and post-testing, the average score on the pre-test being 6.9, and the average score on the post-test being 8.7. When the grades are considered separately, a change of 3.0 is indicated between pre and post-testing for the twelfth grade students; for eleventh grade students, it was 2.5, and for tenth grade students, it was .8.

It is interesting to note that the arithmetic scores on the same test do not disclose this kind of gain. The average for all three grades on the pre-test was 5.9, and on the post-test 6.4, resulting in a gain of .5 per year of study. The arithmetic scores by individual grades reveal for the twelfth grade, a pre-test score of 5.4, and a post-test score of 6.2, for the eleventh grade, 5.8 pre-test, and 6.5 post-test; for the tenth grade, a pre-test score of 6.3 and 6.4 for post-test.

It is apparent that the students really begin to achieve when they enter the eleventh and twelfth grades. This coincides with meaningful vocational experiences. It is most difficult to ascertain the factors which produce the effectiveness in this school. It is our impression that it is substantially due to the effort, energy and insight of the principal and assistant principal. It is worthy to note that the assistant principal at this school was formerly head of the guidance department, and appears to have brought to his new responsibilities additional perceptions gained in the previous capacity.

CASE NUMBER 35

A. General Description

The school in Case Number 35 is situated at the edge of a slum. The streets adjoining the school are a mixture of grossly neglected housing, new housing projects, and well kept middle-class residences. This school is classified as a vocational technical school. It was originally an academic high school, changed to commercial, and only recently has received its new classification.

This is a four year vocational high school for boys with a total enrollment of 843, currently divided as follows: 217 freshmen; 291 sophomores; 200 juniors, and 135 seniors. During the past two years, 294 have graduated. In this evaluation, emphasis was placed upon tenth graders in technical and vocational courses.

B. Student Characteristics

The school draws its students from a wide area and is classified as a central school. The student population is composed of 31% Negroes, 51% whites, and 18% Puerto Ricans. The Negro and Puerto Rican boys in the school are generally the disadvantaged--not necessarily economically disadvantaged since only 36% of the students come from families with an income of less than $3,000. These boys do, however, suffer from their position in society and from lack of previous education.

After graduation, many of the boys enter post-high school institutions, community colleges, and engineering schools. In terms of academic retardation, approximately one-third of the student body is retarded three years of more. It has an "open door" admission policy in contrast to most other vocational schools in the city.

C. Faculty and Staff

As part of a total city system, the teachers are drawn from that system and are not recruited specifically for this school nor are they given any special training. The total number of teachers in the program is 71. Additional non-instructional staff include a principal, administrative assistant, attendance coordinator, one education and vocational counselor, a laboratory assistant, and two librarians.

Starting salaries for teachers are currently $6,600 with progressive steps to $11,000 annually after ten years of service.

Teachers are hired in accordance with state requirements which include a bachelor's degree with approved courses from a recognized college or university. In addition, all specialized teachers must have previous experience in their field. All candidates must pass written, oral, and medical examinations given by the state board of examiners. The faculty have about the same characteristics described in Case Number 34.

D. Curriculum and Scheduling

Courses are offered to provide occupational training in the following categories: architectural drafting, electrical installation, foundry, carpentry, mechanical drafting, printing, sheet metal, and machine shop. In addition, the school has created a non-assigned category which allows for exploration in various other categories prior to assignment. It has one of the few foundry vocational courses in the country. Vocational courses are geared to lower skill and knowledge than are the technical courses.

The school operates on a work-study basis and seeks to secure job placements for part-time work. Classes are scheduled on a split day basis with one-half day devoted to academic and one-half day devoted to vocational training. The program was started in 1915. The minimum age for entering students is 16. Students earn two credits per year. There are five periods of related study in total units given for co-op credit. A minimum of three hours per day are spent on the job, for a total of 600 hours per year. Students earn at a learner's rate of pay. An objective is: to develop marketable skills for real jobs under actual working conditions in industrial plants. The school provides related instruction coordinated with the occupational preparation.

E. Administration

This school has recently benefited from the additional emphasis upon vocational education generated by the school board. This renewed interest has reevaluated vocational education with the objective of gearing the curriculum to employment trends and job opportunities. An additional objective is to secure greater flexibility to allow ease of transfer between selected occupation categories and even between schools, when that is advisable. Simultaneously, a substantial building and modernization program has been undertaken. This particular school is scheduled to move into a comprehensive classification in the early 1970's.

The reported cost per student is $1,470 per year which compares to an annual cost per student in non-vocational high school programs of $1,074 a year.

F. Impact of Program

The impact of the program in Case Number 35 is best indicated by its perfect placement record. The school reports it has actually been able to place all of the graduates in each of the occupational categories. The elation over this placement record must be tempered by the reported 40% dropout rate. The school administration attributes the dropout rate to the belief that the school is used as a dumping ground for students who do not fit into academic programs of other schools.

The school administration has developed a strong extra curriculum which gives substantital support to the students and, no doubt, contributes to the success of the training program.

G. Qualitative Impressions

Students are placed in this school only after screening by a standard test adopted by the system. The effect of this is to screen out the most mentally retarded. Within that limitation, the school itself has an open policy for enrollment.

The 40% dropout rate is of serious concern to the school staff. The response of the administration has been to suggest further screening prior to enrollment in order to assure a genuine interest in vocational education.

The job placement record reported at 100% is indeed remarkable. This record is attributed not only to the quality of the training provided, but to the excellent public relations which the school enjoys with business and industry. The vocational teachers are on a first name basis with many employers. Thus, a telephone call will easily result in the placement of a student.

Data were not available concerning follow-up of placements to determine the length of employment at the job. On the other hand, data were available to the effect that 80% of the graduates are employed in occupations which related to the school program.

Test data was only available on a pre and post-test basis for 140 students enrolled in the tenth grade. The data disclose a pre-reading score of 6.8, and a post-reading score of 7.1. The arithmetic pre-test showed an average score of 6.8, and a post-score of 7.1. These scores suggest little significant change in the group tested. The average I.Q. for this group was 96.2, with a range of 67 to 135.

The school itself reports as factors in its effectiveness, a strong extra-curricular program and good public relations. An undefinable climate at this school also appears to produce good relations between the students and staff and moderately good behavior. This climate was created by one of the early principals by means of the force of his personality.

H. Comments

As stated in our introduction, these two schools were selected for survey from a much larger system. It is both difficult and inappropriate to make recommendations for one part of a larger whole.

Brief charts summarizing the data obtained and specific characteristics of Case Numbers 34 and 35 follow.

SUMMARY DATA: CASE NUMBER 34

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Northeastern: Large City
2. Type: Vocational Education
3. Kind of School: Full Vocational Education
4. Age of Program: over 2 Years
5. Enrollment: 500 ; Males 0 % Females 100 %
6. Average Age: 15-18 Grades 10-12
7. Race/Ethnic: White 2 % Negro 62 % Spanish American 36 % Other ___ %
8. Average Academic Retardation: 1-3 years
9. Family Income Under $3,000: 65 %
10. Primary Occupation of Heads of Household: Service; Blue Collar

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 25 Basic Education 34
2. S/I Ratio: Vocational ___ Basic Education ___
3. Diploma/Certificate: Regular High School diploma and Voc. High School diploma
4. Number of Vocational Offerings: 2

III. TEST DATA

	Metropolitan Achievement Test Reading		N. Y. Arithmetic Arithmetic	
	Pre-Test	Post-Test	Pre-Test	Post-Test
Grade	8.4	11.0	8.4	11.0
N	88	88	88	88
Score	6.9	8.7	5.9	6.4

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 40 % Prior to Program ___ % Regular School ___ %
2. Follow-Up Data:

121 Graduates in 1967-68; 121 Graduates placed in Training Related Jobs: 18 students also pursuing post-graduate training.

V. COST DATA

1. Annual Cost/Student: $1,470
2. Cost/Student Hour: ___
3. Average Annual Starting Salary for Vocational Teachers: $ 6,600

SUMMARY DATA: CASE NUMBER 35

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Northeastern; Large City
2. Type: Work Study; Voc. Ed.
3. Kind of School: Full Vocational Education
4. Age of Program: over 2 years
5. Enrollment: 843 ; Males 100% Females 0 %
6. Average Age: ____ Grades 9-12
7. Race/Ethnic: White 51 % Negro 31 % Spanish American 18 % Other ____%
8. Average Academic Retardation: 3 years
9. Family Income Under $3,000: 36 %
10. Primary Occupation of Heads of Household: Service; Blue Collar; White Collar

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 25 Basic Education 30-35
2. S/I Ratio: Vocational ________ Basic Education ________
3. Diploma/Certificate: Regular High School diploma
4. Number of Vocational Offerings: Vocational and Technical tenth graders were studied

III. TEST DATA

	Stanford Achievement Test	
	Reading	Arithmetic
Grade	8.6	8.4
N	137	135
Score	6.8	6.8

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 ____% Prior to Program 40 % (40% dropout by 11th Grade) Regular School ____%
2. Follow-Up Data:

Not applicable for tenth graders. However, the school has a 100% placement record for graduates.

V. COST DATA

1. Annual Cost/Student: $ 1,470
2. Cost/Student Hour: ________
3. Average Annual Starting Salary for Vocational Teachers: $ 6,600

CASE NUMBER 36

A. General Description

This program of cooperative work experience was started in 1964, in a major city which faces an increasing number of poverty-related problems, including urban blight, high structural unemployment, high delinquency rate, large welfare population, and violent disorders among dissatisfied minorities.

A study by the city community action agency shows that about one-half the urban area contains poverty populations, with the three largest adjoining to form one huge area of blight. A survey of 22,000 families in this area (which is only a sampling), shows the scope and range of the problem. Of these families, 26% were households on public assistance, and of these, 49.2% receive Aid to Dependent Children, indicating that mothers are the household heads. The population of the areas is 80.3% non-white, 67% of whom were born in the southern region of the United States. Of the adults, only 16% graduated from high school, while 23% had not completed elementary school.

Family income in these sample areas ranges from $1,500 for 36% of the families, $1,500-$3,000 for 20%, to over $5,000 for only 17%.

The unemployment rate in the area is over 36%, with unemployment among youth between the ages of 16 and 19, a very high 59.6%. The highest unemployment rate is among non-white females, ages 16 through 19, which is 67.6%.

From this brief report on community conditions, it can be concluded that a cooperative work experience program, such as the one started in 1964, is desperately needed by the poverty youth. Following an experimental period, the program became generally operative during 1967-68 in regular and vocational high schools. There appeared to be many vocations represented in these programs ranging from trade and industrial to health, home economics, and business education. Unfortunately, there are no official figures or statistics available on the overall program, so this study must rely on observations made through visits to several of the programs and on estimates made by certain individuals who have been close to the program.

The program is designed especially for under-achievers and students with mental defects, but still able to function. The students in the program are 17 and 18 years old.

Enrollment is believed to be 1,200. Again, statistics were not made available, but on-site visitations to several schools indicated a low percentage of these students were dropouts, although a greater number were from the poverty groups.

The vocational programming is flexible with many variations of the work experience concept. It is possible for a student to enroll in a course that is half academic and half vocational, or he could be on-the-job, or in the classroom full-time. Generally, the hours in work experience are dictated by the needs of employers and adjustments in the curriculum are made accordingly.

Even though all data on the overall program is lacking or held for release, some insights into the operation of the program, nevertheless, may be obtained by taking a close look at a single project in one of the schools.

The cooperative work training program in the school studied attempts to salvage potential and actual dropouts by combining shop training with on-the-job experience. In the process, a structured academic program was eliminated. Initially, the hope was that the work training program would serve to convince students to return to the regular program, or allow them to obtain some minimum skills so that they would be able to obtain jobs and leave the school. Fortunately, a dedicated staff has made the program more than this.

B. Student Characteristics

The program enrollment was 24 boys, one of them Negro. However, all come from low-income families and the relatively high proportion of white students is attributable to the fact that they are from poor Kentucky and Tennessee families who recently moved into the district. The more established population and majority of enrollment in the whole school is Negro. Lack of interest in the program among the more established families is said to be due to the image of the program as a "dead-end", since there is no opportunity to receive a high school diploma. An inadequate number of academic credits is offered and a special certificate of completion is awarded instead.

The students are of average I.Q., ranging between 90 and 110. All 24 of the students have had disciplinary problems; most of them have police records. The students interviewed said they did not like school.

C. Faculty and Staff

The faculty consists of a teacher, a counselor, and the principal. The teacher is required to have experience in his vocation and must have a degree or be working toward a college diploma. The counselor is not assigned full-time, but is usually available to the students. The principal assists in planning in addition to supervising the entire school.

The starting salaries for teachers in the school are $8,400, although additional stipends are offered for field work, job placement activity, and extra hours that a special program may require.

In this program, the teacher was selected by the principal. The program was not specifically funded or curricula developed when the teacher was hired; thus these became his first responsibilities. Five visits to the program were made and the evaluator estimated that the teacher has averaged 10 to 15 hours work per day to develop materials for his class. The teacher's time seems to have been divided equally between the class and shop and work in the field.

D. Curriculum

The curriculum was designed by the teacher, who also teaches the related academic subjects. The vocational offering is automotive mechanics.

In the academic area, the teacher attempts to provide the students with individual attention. With the help of teacher constructed and, in some cases, achievement tests, the teacher evaluates the needs and problems of each student and designs a program for him. The classwork includes labor market orientation (lectures on basis of teacher's experience), communication skills, and consumer related mathematics. The shop work which is part of the daily four hours of class-time, is devoted to the mechanical functions of the automobile. Thus, academics take a very low priority with the students daily assigned reading in regular texts--if their reading level is adequate.

The work experience part of the project averages about 27 hours per week. The students work in repair shops and service stations, or in wholesale or retail auto parts operations. The field work is also supervised by the classroom teacher. On the average, students are paid $1.75 per hour by their employers.

Evaluations of the students are conducted periodically by both the teacher and the employers in terms of work quality, personal appearance, attitudes, willingness, and cooperation. The teacher confers with employers and makes site visits to the work stations.

The shop was well equipped, with all equipment necessary to rework an automobile from body and fender repair to overhaul of distributer. Also, special tools necessary for working on foreign cars were available. Since there were no texts or other materials available in the program, the teacher obtained written material from the auto industry that he felt was relevant to the course schedule (e.g., maintenance manuals, trouble-shooting guides, wall charts, etc.). The teacher designed his own visual aids on 18" x 24" cards on the mechanical hydraulic and electrical systems of the automobile. Students do have access to the instructor's texts, e.g., Auto Essentials and Auto Mechanics.

E. Administration

The cooperative work training project is sponsored by the high school in conjunction with the city school system. The school principal has overall responsibility for the project. Funding is secured, in part, from the State Board of Vocational Education.

The reported cost per student in the project is $1,200 per year, but this figure may have included the initial price of new equipment purchases for the project, which can be used in future years.

F. Impact of the Program

Since the goals of the project are rather confused between encouraging dropouts to continue school and providing students with enough vocational skill and remediation so that they could leave the school with a degree of job readiness, the record is difficult to interpret.

If the goal was to retain the student, the program failed because nine of the original 24 enrollees left before the end of the year. Of these, one returned to the regular program, two accepted full-time jobs in the auto service industry, one became an apprentice, one was removed from the school by court order, two were returned to a correctional institution, and three dropped out. Six of the 14 who remained in the program through the end of the school year plan to return to the regular curriculum. The others said they plan to return to the program.

Through the job development efforts of the teacher, all students obtained employment. The teacher has maintained contact with the students and plans to assist them in the future, as necessary, although no formal follow-up procedure has been added to the program.

G. Qualitative Impressions

This project, by no stretch of definitions, can be considered a structured program, or one designed through expert guidance, technical assistance, and strong support from the higher levels of the school administration. What this project does show is the results that can be achieved in vocational education through the efforts of a dedicated teacher who does not necessarily have the background to effectively perform all the functions that were imposed upon him: shop teacher, counselor, job developer, and academic instructor.

In many ways, the teacher and his students were handicapped from the start when their project was labeled a "dead-end" program with "getting out" being the primary goal of all concerned. In a sense, this reduced the cooperative work experience program to the status of the "dunce corner".

The fact that only one Negro in a predominately Negro school is enrolled may reflect a hesitancy on the part of concerned parents to enroll their children in such a course of last resort. The majority of white students came from families that were new to the area and the educational system.

Under these circumstances, it is surprising that the program has succeeded to any extent at all. The students who returned to the regular program expressed a desire to stay with the teacher who had helped them, but he encouraged them to return. The three who left for full-time work utilized their experience in the program to gain entry-level jobs. Their teacher maintains contact and will help them remain on the job.

H. Comments

If the organization and administration of the sample project of the city-wide program are examples of how the total system operates, drastic action is needed to put the program in order.

A complete evaluation of the program should be made and the information released to the public so that strengths and weaknesses in the program can be identified. The program has a project director who is weak in staff and degree of autonomy to effectively plan and coordinate this program. This problem needs to be corrected.

An effort should be made to structure the program and develop a curriculum based on research and expertise that must be available to a school system of this size.

A brief chart summarizing the data obtained and specific characteristics of Case Number 36 follows.

SUMMARY DATA: CASE NUMBER 36

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Large Midwestern Inner City
2. Type: Special Needs: Work-Study
3. Kind of School: Full-term Vocational
4. Age of Program: 0-6 months
5. Enrollment: 24 ; Males 100% Females 0%
6. Average Age: 16-18 Grades 10-12
7. Race/Ethnic: White 79 % Negro 4 % Spanish American 13 % Other 4 %
8. Average Academic Retardation: 3 years
9. Family Income Under $3,000: 50 %
10. Primary Occupation of Heads of Household: Blue Collar

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 10 Basic Education 10
2. S/I Ratio: Vocational 10/1 Basic Education 10/1
3. Diploma/Certificate: Special Certificate of Completion
4. Number of Vocational Offerings: 1

III. TEST DATA

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 33.3% Prior to Program ____% Regular School 54 %
2. Follow-Up Data:
   24 graduates placed on training related jobs.

V. COST DATA

1. Annual Cost/Student: $ 1,200
2. Cost/Student Hour: ____
3. Average Annual Starting Salary for Vocational Teachers: $ 8,400

PROGRAM CATEGORY II: DROPOUTS/POTENTIAL DROPOUTS (RURAL AND SMALL CITY/SUBURBAN)

CASE NUMBER 14

A. GENERAL DESCRIPTION

In 1964, the Vocational Division of one southwestern State Education Agency initiated a state-wide "Occupational Training Program" for in-school youth unable to succeed in the regular education program. The program was designed to meet the needs of the students who were not sufficiently retarded to qualify for vocational rehabilitation, but who were not succeeding in the regular program.

To be eligible for state funds made available under this program, local school districts were required to conform to the minimum regulations established by the Vocational Division. The most important of these are that the students served must be 14 years of age or older; the students must have academic, socio-economic, or other handicaps which prevent them from succeeding in the regular education program; the students must be one or more years academically retarded in several areas; the academic instruction must be flexible to meet the individual needs of the students; and classes should be kept to a minimum of 20.

The occupational training may be classroom instruction with shop training or on-the-job training. Within this general framework, local school districts were allowed and encouraged to experiment with new curriculum, innovative teaching methods, etc.

The Occupational Training Program (OTP) began with only 25 teachers and 938 students as a pilot program, but has expanded considerably. During the 1967-68 school year, 59 local school districts had OTP units.

It was obviously impossible for the project staff to survey every one of these programs, but the state office did refer the study staff to what they believed to be a representative sample. The staff selected the curriculum for Case Number 14 as representative of this state-wide program for several reasons:

1. The program had innovative features.

2. The emphasis is clearly placed on academic achievement which parallels a primary criterion of this study for an "effective" program.

3. Data were ample and readily available.

Case Number 14 is located in a town of 2,000 which is a farm community with virtually no industry. The closest large city is 20 miles to the north. The town's population is heavily Mexican-American, with a few Negroes and whites. The whites constitute the power structure in the community.

The economic difficulties faced by the families stem partially from the lack of good job opportunities in the area. Many residents are former migrants who settled in the area, but have no salable skills even if jobs were available.

For a number of years, the town's schools had been losing 18% of their students between eighth and ninth grades. Most of these students had histories of past academic failure and behavioral problems. Over age for their grade placement, they became discouraged and dropped out; they left school without even the minimum skills needed for an entry-level job. They read and performed arithmetic on an elementary school level--another handicap to a successful out-of-school adjustment.

Therefore, during the 1966-67 school year and the summer of 1967, the school administration and teachers developed an OT Program, aimed at lowering this dropout rate. It was their hope to not only retain the students in school, but to "get them ready" for the regular high school curriculum. The counselor identified 92 potential dropouts in January 1967, and 87 voluntarily agreed to enter the program. Most had been in seventh grade in 1966-67. A few students who were in the sixth grade during the previous year, and who were at least 14 in September 1967, were also enrolled. This group would bypass the seventh grade, and, hopefully, be ready for the ninth grade by the fall of 1968.

B. Student Characteristics

Nearly all the 48 boys and 37 girls in the program come from families living under extreme economic hardship. School officials estimate that 90% come from low-income families (annual income less than $3,000). Many have only one parent in the home. Of the 85 students in the program, 75% are Spanish-speaking, 20% are Negro, and 5% are Anglo. The average academic retardation of the group is about two years, but only 10% are severely mentally retarded (I.Q. below 75).

C. Faculty and Staff

Five teachers--three academic and two vocational--were assigned to the OTP. No special staff was hired. The school counselor devotes a considerable amount of time to the program, both in counseling the students and keeping abreast of their academic progress. She is the key person in the program.

Starting salaries for teachers in this program are $4,720 per year. Academic teachers must have a bachelor's degree. Vocational teachers must have two years of work experience in their teaching area. It is preferred they have a bachelor's degree, but this is not a requirement. The typical teacher in the program has several years of teaching experience, and is involved in advanced degree programs.

In terms of training, the teachers went through a paid summer "planning" session with the curriculum director.

Except for the paid summer sessions, the annual salary for the teachers in the program is the same as those in the regular school system.

D. Curriculum and Scheduling

Case Number 14 is one of the few OT Programs that has experimented with team teaching. The school day has eight 50-minute periods. In the first period of the day, all students meet with the five teachers for social studies. During this period, one or two teachers can conduct large group activities while the other teachers give individual or small group help.

During the second period, students are in physical education class (with the regular students), or are working at an assigned duty in the school while the five teachers meet to plan and coordinate the remainder of the day's activities. The schedule for the rest of the day includes two periods of shop (general mechanical repair or home economics) and three periods of academics (English, math, and reading). Because all academic work is team taught, the academic periods are flexible. For example, students doing well in English and poorly in math spend more time with the math teacher than with the English teacher.

No textbooks are used. Instead, each student is issued a newspaper every morning from which most of the teaching is done. In addition to the newspaper, considerable use is made of audio-visual aids. The school has a remedial reading lab to which students are assigned for as many periods as necessary to improve their reading ability. The students in the program are given no homework. No report cards are issued.

To the maximum extent possible, the academic teaching is related to current topics in shop and home economics courses and to the world of work in general. For example, in English they learn grammar through writing job application letters. Their vocabulary is expanded by learning words related to mechanics or home economics. The math curriculum includes weights and measures, income management, banking, and taxes.

Since the curriculum is ungraded, students progress at their own rate. The only test given is the California Achievement Test, which is administered in October, January, March, and May. The test results are discussed with the students to point out where improvement is needed and to show them the progress they have made. By emphasizing the progress the student has made during a three-month period, the staff believes that the student's self-confidence is bolstered, and the fear of testing, developed through the years of failure, is alleviated. Of course, the test results also tell the faculty in what areas the students need help.

Another feature of the OT Program is the activities period. To give them a feeling of belonging in the school and to teach them responsibility, each student is assigned some duty in the school for one hour each day. Among these duties are: working as a clerk in the principal's office, athletic equipment manager, film projectionist, library aide, or lunch room helper. Formerly, these jobs had been reserved for the top students in the school.

E. Administration

Local programs approved by the state (those meeting the OTP policy regulations) are eligible for state funds on a state-local matching basis. Specifically, "the portion of salaries of academic teachers and guidance counselors allocated to the schools as part of the Minimum Foundation School Program can be used by the schools to match salaries and travel of vocational teachers assigned to this program, and the portion of salaries for excess teacher units assigned to this program can be used for matching salaries and travel of vocational teachers, and local funds can be used as matching." In addition, the state can reimburse 50% of the cost of instructional equipment and teaching aids. In turn, the state receives federal funds for vocational education on a matching basis, but the funds lose their identity before they reach the local level, because they are put in the state general fund and disbursed from there. Once a program qualifies, the final responsibility (including local approval) is vested in the superintendent of schools. The responsibility for day-to-day functioning of the program rests with the principal.

The junior high school counselor is responsible for the initial screening of students to determine who is eligible and to keep up with student progress.

F. Impact of the Program

Since the program has been in existence only since September 1967, any evaluation of the program's success must, at best, be tentative. However, it appears, at this juncture, that it has succeeded in substantially reducing the dropout rate. About 18% of the program's students were expected to drop out of school between eighth and ninth grades. The program took only the most dropout-prone--a group whose expected dropout rate was close to 100%. During the year, the OT Program has lost only two of the 87 who began the program in September, a rate of 2.3%. One student was expelled as a disciplinary case and the other dropped out because of financial hardship at home. There is the possibility that some students may not re-enroll next September.

The first report from the program early this fall indicates that the anticipated positive response from the students to the program was justified. While in previous years, the dropout was some 50%, all but a few of the 80 students returned to high school. As of this writing, the dropout rate from one year to the next was expected to be less than 3%.

A greater danger and one which causes the OTP staff some concern is the possibility that when the students return to the regular ninth grade program without the special attention they received from the program staff, they will return to their former pattern of failure and discouragement. If this occurs, about all the program will have accomplished is moving the "dropout year" from the eighth to the ninth grade.

School authorities believe there is evidence to demonstrate that students in the program have shown significant gains in academic achievement during the 1967-68 school year. California Achievement Test results were provided for 80 students in the Program on an October, 1967, pre-test and a May, 1968, post-test. The average pre-test score was 6.6 and the average post-test score was 7.2--a seven month improvement of .6, or a little over a half year's achievement in seven months.

Nevertheless, the students still did not achieve the one grade placement increase needed to keep them from falling further behind academically. A total of 14 of the 80 students or 17.5% did show academic gains of more than one year during the seven months. Four others (5%) increased exactly one grade, therefore, 22.5% of the students showed significant gains. In addition, 12 students (15%) either scored lower in May than in October, or showed no increase at all. Six others (7%) increased only .1 or .2 grades. Therefore, the number of successes is almost equally balanced by the number of failures.

However, there is some evidence to suggest that students, while in the program, made greater achievement gains than they had the year before. Complete two-year data was available on 20 students who had been in the sixth grade in 1966-67 and the OT Program in 1967-68. They progressed only 2.9 months in their sixth grade year, but made a 7.5 month growth from October 1967 to May 1968. Complete two-year data was also available for 42 students that were in the seventh grade during 1966-67 and the eighth grade OT Program during 1967-68. This group increased their achievement only 3.7 months in the seventh grade, but 7.1 months during their OT year. Meaningful normative data on the California Achievement Test was not available for Spanish-speaking students for comparison purposes.

Behavioral changes and, more importantly, changes in attitude toward school and learning improved as a result of the program. The principal cites examples of OTP students who had been continual disciplinary problems but who, since they had been in the program, were never sent to his office.

A student evaluation of the program was requested. Some student quotes provide an indication of their new outlook toward education:

> "Last year I never did study nor pay attention to my teachers. I was always talking and playing around. Sometimes I would argue with the teachers or talk back to them. I was a mean one. I never did think about studying or passing. I didn't pass. I think I have improved a lot this year. I now do more studying and listen to instructions. I hope it will continue like this as I go higher in school."
>
> "This is the first year that I have ever worked so hard, because I wanted to."
>
> "I learned how to get along with others and make friends."
>
> "I liked the program because they gave us many opportunities and we could be, and were, trusted."
>
> "I learned many things and I am grateful to all my teachers who took time with me."

One of the problems, particularly at the outset of the program, was obtaining the support of the community and even of the school officials. The principal was quite skeptical of the new methods being tried, but is now convinced that the program is worthwhile.

The school counselor points out that:

> "There was a strong tendency on the part of other students, other teachers, and the community to put a stigma of mental retardation on students in this program. A strong public relations program is necessary to inform other students, other teachers and the community of the purposes, methods, and results of this type of program."

With all its innovative features, the cost of the program is very low. Both the cost of the OT Program and the cost of regular education in this school are very low. The yearly current budget cost per student (the sum of salaries, materials, supplies, operating costs such as repair and maintenance, and other current budget items, excluding the cost of the building and site, divided by the number of students) is $325 for the vocational program and $300 for the regular junior high school students who are not enrolled in the program. The students are in school eight hours per day, five days per week, for 36 weeks each year. The 85 students, thus, spend 122,400 hours in school (36 x 40 x 85). The total current cost of the program is $27,625, (85 x $325). By dividing $27,625 by 122,400, a cost per student hour of 22.6¢ is obtained. Part of the reason for the excessively low cost is the low cost of living in this rural area. Teachers salaries are quite low, beginning at $4,720 annually. This explains, in part, why education is inexpensive, but not why a program with so many innovative features is so inexpensive. The following features of the program may give some clues as to why this has been achieved:

1. Resources were utilized which were already available.

2. a. No new teachers were hired.

   b. The vocational equipment was not very expensive and some of it was already there.

   c. The teachers developed the program themselves during the summer; no outside consultants were hired.

2. More efficient use was made of the teachers' time through more efficient scheduling.

3. The innovative, exemplary features were more the result of insight and imagination, than of large monetary outlays.

   a. Team teaching featured informal small group instruction for students in need of help in a particular area and daily meetings of the five members of the team. This was accomplished through scheduling changes.

   b. Giving the students in the program the jobs in school formerly reserved for the "A" students cost nothing.

   c. All tests were eliminated except the California Achievement Test which is periodically administered.

   d. The daily newspaper was substituted for textbooks.

e. The counselor began to keep extensive records on each student for evaluation purposes.

Although the program takes place in a small town setting in a relaxed informal atmosphere, many of the techniques could probably be transported to a large urban junior high school.

A work-orientation program at the junior high level has two distinct advantages over a high school vocational program. In the first place, it can be used to improve the achievements and attitudes of students "in time". By the time they become juniors or seniors in high school, time is running short. Secondly, the vocational aspects are less costly. A junior high vocational program, not aiming to prepare students for immediate employment, need not place emphasis on the attainment of a skill. It is not so important that the shops be equipped with the latest tools and machinery. Yet the vocational training at the junior high level can still be used to teach academics, instill good work habits, and give students a feeling of accomplishment, no matter what the quality of the equipment used.

When dealing with the unmotivated student, it is important that tests and other curriculum materials be meaningful. They must be related to present-day living and must interest the student. Inexpensive texts such as newspapers, magazines, paperback books, or even comic books can be used more effectively to teach English comprehension to this type of student than dry texts which are "safe," uncontroversial, uninteresting, and unrelated to the real world. A shift away from the traditional "Dick and Jane books" could be accomplished with little additional cost.

The program has encouraged academic achievement by doing away with all classroom tests except the California Achievement Test. The students are made to feel that these tests are simply to show them where they need additional work. When students make improvements over their previous score, they are praised and encouraged to do even better the next time. Tests are no longer something they fail; they cannot fail. In addition, the staff has a consistent instrument for evaluating student academic progress. This very simple feature of the program is quite effective and not costly. It is a workable compromise between no testing, which gives the faculty no tool for evaluation, and extensive testing which makes the low achieving student "test shy."

Perhaps one aspect of the experience in the program which would be most difficult to adapt to a large urban ghetto school is the duties of the counselor. One counselor is sufficient for this small school. The student problems which she must deal with are of a lesser magnitude than those in the slums; she faces no serious behavior problems, narcotics, etc. Many urban schools do not now have enough counselors. It is unlikely that their present staff could both handle counseling duties and also the paper work needed for program evaluation.

Nevertheless, the success of this program demonstrates that a good program can be developed inexpensively by tapping the resources already available and by using a little imagination and initiative.

G. Qualitative Impressions

The philosophy of the OT Program comes as close as any program surveyed in this study to being in harmony with the criteria for "effective" programs as defined in this study. Academic achievement is of primary concern--"getting the students ready for high school." The vocational and academic phases are well integrated through team teaching. The program has initiated methods of attempting to reach and motivate students which are rather unorthodox in comparison to traditional educational methods and concepts.

The key to the success of the program is the attempt of the staff to make sure that the program interests the students, and that the students feel they are making progress. This has partially been accomplished by a few simple "gimmicks", such as giving students the privilege of having a duty to perform in the school, posting charts showing each student's progress, and replacing textbooks with the daily newspaper. It has also been accomplished because the staff carefully follows the progress of the students. The schedule and curriculum designed by the staff are flexible enough to give each student the help he needs in areas where he is weak.

The innovation and flexibility has paid dividends, particularly in reducing dropouts and improving student attitudes toward education and, to some degree, in raising academic achievement. It is somewhat disappointing that despite the stress placed on academics, the students progressed on the average only a little more than one-half a grade level during the seven-month period.

An observable weakness in the program was the quality of the vocational training. The instructors are qualified and dedicated, but the equipment is of mediocre quality. Also, the home economics curriculum is particularly not work-oriented. State officials would prefer that food service laboratories be set up to apply home economics training to employment rather than to homemaking. The choice of placement in general mechanical repair or home economics was made by asking the students which vocational courses they preferred. This approach may have contributed to the students' interest in the program, but ignored other important considerations--particularly the demands of the labor market. At the time they were surveyed, it is likely that most of the students were completely unaware of many alternatives they might have chosen.

These students are at the junior high school level and, hopefully, the OT Program is not the end of their education. Thus, it is not so crucial that the students be given quality vocational education in preparation for a specific job as it would be if the program were at the senior high level. The major criticism is that not enough emphasis was being placed on acquainting the students with a broad range of employment fields. The OTP year could be used as a period of work orientation giving students a chance to try various occupational areas or clusters to determine interests and aptitudes. Students are given some exposure to occupational areas in addition to mechanics and vocational home economics, such as through reading the newspaper and other occupational information materials, but this is not a major emphasis in the curriculum. This problem is relatively minor and could be easily changed, simply by a shift in emphasis.

Apparently, there is a rather serious problem with the community. The community first looked upon the program as being a program for the mentally retarded. Now there is a different problem. The students in the program are making more progress than the rest of the junior high students and school officials are pondering the best way to sell the program to the community without making the regular program look bad.

This program was receiving good publicity outside the community, however. The daily newspaper used by the students, but published in a nearby city, has devoted several articles to the program. The state agency uses Case Number 14 as a showcase example for visitors of a successful OT Program.

There is a warm relationship between the state agency and local school officials. The agency has made suggestions to program personnel for improving the program, but in no way has it tried to dictate how the curriculum should be organized.

The state agency has provided strong leadership for vocational education throughout the state; Case Number 14 is an outstanding result. By establishing a state program with definite requirements, the state insures some minimal standards for the programs within the state. State officials are eager to give professional assistance to school districts which need technical help in establishing an OT Program, but from speaking with vocational educators around the state, one gets the impression that the state agency does not "meddle." Although funds are limited and no school gets enough money for all the OTP units it would like to have, every attempt is made to distribute those funds available as fairly as possible.

H. Comments

Case Number 14 has only two areas in which improvements are recommended --the quality of vocational training and the length of the program. The training should be more job-oriented and more emphasis should be placed in the curriculum on investigation of a broad range of occupational areas.

More importantly, to insure the success of the program and to insure that the gains are not lost when the students go back to the regular program, the program should be extended beyond one year. It may not be necessary to extend the program in its entirety, but at least it would be desirable to "ease" the students back into the regular program by giving them some special help and attention. Perhaps only some field trips and one or two special classes would be sufficient.

An important aspect of the success of the program, judging from the students' comments was the individual attention they received. It gave them the feeling that someone cared about them and was interested in their problems. If these students are to make a successful adjustment to a regular high school, they must not lose confidence in the staff's concern for them.

A brief chart summarizing the data obtained and specific characteristics of Case Number 14 follows.

SUMMARY DATA: CASE NUMBER 14

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Rural Southwest
2. Type: Comprehensive Junior High
3. Kind of School: Pre-Vocational
4. Age of Program: 7 months - 1 year
5. Enrollment: 85 ; Males 56 % Females 44 %
6. Average Age: 15 Grades 8
7. Race/Ethnic: White 5 % Negro 20 % Spanish American 75 % Other __ %
8. Average Academic Retardation: 2 years
9. Family Income Under $3,000: 90 %
10. Primary Occupation of Heads of Household: Blue Collar

II. INSTRUCTIONAL DATA

1. Class Size: Vocational Varies-team teaching Basic Education Varies-team teaching
2. S/I Ratio: Vocational 21/1 Basic Education 14/1
3. Diploma/Certificate: Not applicable. This is a junior high school program.
4. Number of Vocational Offerings: 1 (pre-voc.)

III. TEST DATA

California Achievement Test		
	Pre-Test	Post-Test
Grade	8	8
N	80	80
Score	6.6	7.2

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 2.3 % Prior to Program 18.0 % Regular School 3.6 %
2. Follow-Up Data:

V. COST DATA

1. Annual Cost/Student: $325.00
2. Cost/Student Hour: 22.6c
3. Average Annual Starting Salary for Vocational Teachers: $4,720

CASE NUMBER 17

A. General Description

A vocational education program specifically designed to serve the slow learner and "potential dropout" was introduced to this small, midwestern city in 1964. Sponsored by the community, with assistance from the state, the program had an enrollment of 86 full-time students in the 1967-68 school year at the sophomore, junior, and senior levels. In-school work experience programs are conducted for sophomores and juniors. Some juniors and seniors work with employers outside the school from 15 to 25 hours per week.

While strong emphasis is placed on vocational courses and job training, the curriculum also includes vocationally-related academic subjects.

The project recruits most of its students from a self-contained program for slow learners which was organized in the community's three high schools in 1961. Prospective enrollees are selected through an evaluation of previous achievement, attendance, and discipline, as well as home and community background. Parent and student consent are required for admission. Placement tests and psychological examinations, where recommended, are also administered.

B. Student Characteristics

Most of the enrollees came from disadvantaged economic, social, and educational backgrounds, some 50% from homes with incomes less than $3,000 per year. The age range was from 15-18; I.Q. ranged from 80 to 110. About 12% had some record of delinquency.

Of the 86 students in the 1967-68 classes, 36% were girls. Racially, the group distribution showed 28% Negro and 72% white.

C. Faculty and Staff

Of the faculty and staff of 31, all but four also teach in the regular school. Teachers are employed by the school district after screening by the principal. Teachers and counselors are certified under the State School Code. Their work year and salary are identical with teachers of regular courses.

The teachers in the homerooms, where the students undertake academic study, are all certified special education teachers. This requires considerable academic training of up to 80 credits beyond the minimum certification requirements. In this state, there are special requirements for those who are certified to participate in the education of the mentally handicapped.

D. Curriculum and Scheduling

Academic courses are work-oriented with reading, spelling, and speech considered the most essential. English classes emphasize language skills necessary for seeking and securing employment. Social studies center around such topics as "Why People Work" and "How Do People Make A Living?" Occupational interviews, letters of application for employment, and techniques used in answering want-ads are tied to other academic courses.

Remedial courses are available in language arts and mathematics, with a reading laboratory available to those lacking adequate reading skill. Oral reading is emphasized with all students urged, but not required, to participate. Classes in vocational/occupational skills average 10 students. Students select their own courses, limited only by the prerequisite training required in some subjects. These courses include: Typing and/or shorthand, home economics (tailoring, clothing, advanced dressmaking, foods, family living, consumer buying), office occupations, blueprint reading, drafting, electricity, machine shop, metals, power mechanics, printing, woodworking, photography, welding, arts--fine and applied, and health occupations. A major component of the program is in-school and on-the-job work experience.

The jobs performed by students include tool maintenance and distribution in the Industrial Arts Department; serving as monitors for the counselor and attendance office; filing, book repairs, and keeping inventories; assisting in the cafeteria; maintaining automobiles in the Driver Education Department; issuing equipment and performing other tasks in the gymnasium locker areas; keeping official scoring recordings in intramural sports events; and aiding in maintenance and distribution of audio visual equipment. Students are paid 65¢ per hour as a beginning wage on in-school jobs. They may receive raises to a maximum of 75¢ per hour.

Community work experience is arranged through local employers who:

1. Provide students with at least 15 hours work per week during the school year.
2. Agree to discuss any dismissal of a student-employee with the work coordinator before the discharge.
3. Periodically submit evaluations of the students to the work coordinator, including two meetings involving an interview with the student-employee's immediate supervisor present.

A student-employee may not work on days he does not attend school. The employer also terminates the student-employee if he drops out of school, protecting jobs for students, and eliminating the need for employment as an excuse for dropping out of school. Employers are encouraged to train students for full-time jobs after graduation. The students are paid an average of $1.76 per hour.

Juniors are placed in community employment positions after school and on weekends. Seniors are permitted to work the last one or two periods of the regular school day, as well as after school and on weekends. School credit is provided for satisfactory work performed.

Perhaps the most important aspect of the program is that the students are treated as normal children, although they receive more personalized attention. Therefore, the regular texts are used for basic academic instruction, with complementary materials like newspapers, magazines and films, used in conjunction with the standard text. The central library is used extensively and the facility is available one or more times per week to the students.

Again, the effectiveness of the program seems to lie in the small grouping of students, in addition to the special qualifications of the faculty.

E. Administration

The State Division of Vocational Education and Rehabilitation, Special Needs Department, cooperates with the program by providing technical and financial assistance. During the 1967-68 school year, local government provided $32,700, and the State added $27,425. The average cost per student per year is $802.

F. Impact of the Program

Indications are that the program succeeds in reducing the dropout rate and increasing the employability of the slow learner-potential dropout it serves. Of the 109 students enrolled in the three grades in the 1966-67 school year, only nine failed to complete the school year, a retention rate of 89%. This was 10% higher than the rate for all classes since the program opened in 1964, indicating a gradual improvement. Only one sophomore of the 42 enrolled in the 1966-67 school year dropped out.

The average wage of the juniors and seniors participating in the community cooperative work program increased from $1 per hour during the 1965-66 school year to $1.76 per hour the following year.

In response to a questionnaire in 1966-67, 53 students said they did not dislike being in the program, with 10 answering that they did dislike it; 57 out of 63 felt they had improved as students since entering the program; and 35 of 38 answering said they like school more since they came to the center.

In conducting this study, an attempt was made to assemble data on a pre and post-program basis for an 18-month period. The average pre-program reading score was 4.9 for 24 students at grade level 8.1. The average post-program score in reading was 6.4 when at grade level 9.7, or an improvement of 1.5 grades in a one and one-half year period. In arithmetic achievement, the test data for the same group, at the same grade levels, reveal a pre-program score of 5.7, and a post-program score of 5.8 -a fractional improvement. Scores in reading reported by the school for a group of 29 juniors are somewhat different. A pre-test administered in September 1964, resulted in an average score of 4.8. Another test administered in May 1967, resulted in an average score of 8.7, suggesting an improvement of 3.9 in reading over a period of 32 months. Test results for the same group in arithmetic show an average of 5.8 in September 1964, as compared to an average of 8.2 in May 1967; an improvement of 2.4 in the same period.

In reading, 26 said they did not like to read, while 37 said they enjoyed reading. Only two students said they enjoyed reading less since enrolling, while 21 replied they enjoyed reading more. Of the 30 students replying, 23 said they felt the work program had helped prepare them for a future job.

Teachers also submitted an evaluation. Asked to rate the program, 14 replied that the program was successful, 12 said moderately successful, while none scored it unsuccessful.

G. Qualitative Impressions

In general, there is ample evidence that this program is successfully achieving its goals, as far as the goals go. The dropout rate is relatively low, test comparisons show a marked improvement in the academic achievement level of the enrollees, while the work experience/supportive services definitely carry forward the objectives of the program.

Most commendable is the successful integration of academic subjects with vocational goals and interests of the students. In this way, academic achievement maintains its rightful place as the primary objective without compromising vocational training needs.

The work-training program is carefully structured, both in and out of school, with the roles and responsibilities of students and employers carefully defined. In part, the success of the out-of-school part of the program is reflected in the increased average pay scale being offered the student-employees since the program began, although undoubtedly, there are other factors involved; generally, employers are satisfied with the students and continue to cooperate in increasing numbers.

The comparison made of test results is of dubious validity. Since there was no control group against which to compare the results, it is difficult to determine exactly how much difference the program has made in the students, as opposed to the progress they would have made in the conventional courses.

This points up what would seem to be the one important weakness of the program design: Enrollment was limited to slow learners and "potential dropouts" who, in a sense, are the cream of the problem students. By design, the program by-passed the most critically disadvantaged--the non-learners, non-achievers, and actual dropouts.

H. Comments

Consequently, it is recommended that this type of program, while generous in its enrollment policies with regard to students with special problems, be opened still more to embrace the true dropouts, as well as those suspected of being incipient dropouts. Under such a well-structured and effective program, the melding of both categories of problem-students could provide the true, hard-core dropout with models from his peer group and other incentives for achievement.

A brief chart summarizing the data obtained and specific characteristics of Case Number 17 follows.

SUMMARY DATA: CASE NUMBER 17

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Midwest small city-suburban
2. Type: Special Needs
3. Kind of School: Comprehensive
4. Age of Program: 2 years or more
5. Enrollment: 86 ; Males 64 % Females 36%
6. Average Age: 16.5 Grades ______
7. Race/Ethnic: White 72 % Negro 36 % Spanish American ___% Other ___%
8. Average Academic Retardation: 3 years
9. Family Income Under $3,000: 50 %
10. Primary Occupation of Heads of Household: Blue Collar

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 10 Basic Education 18
2. S/I Ratio: Vocational ______ Basic Education ______
3. Diploma/Certificate: ______
4. Number of Vocational Offerings: 15

III. TEST DATA

	PRE-TEST (SRA)		POST-TEST SAT(SERD)	
	Reading	Arithmetic	Reading	Arithmetic
Grade	8.0	8.0	9.7	9.7
N	24	24	24	24
Score	5.0	5.7	6.0	5.8

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 9% Prior to Program ___% Regular School ___%
2. Follow-Up Data:

V. COST DATA

1. Annual Cost/Student: $802
2. Cost/Student Hour: ______
3. Average Annual Starting Salary for Vocational Teachers: $______

CASE NUMBER 21

A. General Description

In November 1966, a junior-senior high school in a southern state put in operation a program of occupational training and work opportunity called Gainful Employment Classes. It is intended for in-school students who are unable to keep up with regular schooling. This marks this state's first effort to provide meaningful educational experience to the low achiever.

The junior-senior high school, built in 1959, is on the outskirts of a town of 2,200 in the midst of a poor farm area with virtually no industry. It has acquired an "A" accreditation since the present principal assumed his position in 1962. Negroes make up the bulk of the population (84%). The closest city (30,000 inhabitants) is 45 miles to the north. The school serves two school districts encompassing an area of 850 square miles. It has an all- Negro student body of approximately 1,000 students. About 90% of the students come to school by bus.

Candidates for the program consist of potential dropouts within the school from among the seventh, eighth, and ninth grades. The program combines vocational training with academic courses, with half a school day being allotted to each. In addition, many of the students are given part-time jobs. Successful graduates of the two-year program receive a certificate of achievement. They may then either resume regular school studies or take jobs found for them.

B. Student Characteristics

A total of 95 students were enrolled in the Gainful Employment Classes during the 1967-68 school year. Of these, 65% were boys and 35% girls. All of them were Negro. The average age is 17.5. Their academic retardation is about three years. Most of them are severely mentally retarded (I.Q. below 75). For example, the average of 25 tested students varies from 51 to 79, and averages 61.6, as opposed to 79 to 84 for the school as a whole. All of the participating students come from low-income families of less than $3,000 annually. About 85% are products of broken families, usually living with their grandparents or, in some instances, with other relatives. Their schoolwork has been characterized by low performance and lack of interest and direction, their behavior by minor anti-social tendencies. Ten of the 95 have severe emotional problems.

C. Faculty and Staff

Three teachers are assigned to the Gainful Employment Classes Program. One teacher is responsible for the vocational and academic work of the girls, the other two for the academic and vocational work of the boys. The girls' teacher has just earned an undergraduate degree, but has been assigned to the program because of her experience in cafeteria management.

The boys' academic studies teacher has a B.A., while the vocational teacher does not. The latter was selected on the basis of his experience in agriculture and knowledge of farm and automotive machinery.

The students also have access to the school's two counselors, a 9,000-volume library, and other facilities. The teachers appear to be very dedicated to their students and to their work. With regard to selection of the teachers, the principal said: "You don't get these kinds of people from college, they almost have to be born."

The teachers attended a special summer program, and participated in a workshop for children with special needs and workshops in food services and mechanics.

D. Curriculum and Scheduling

The curriculum is geared to achieve one of two purposes: gainful employment or successful resumption of regular schooling. It, therefore, includes both vocational and academic subjects.

On the vocational end, the courses for girls are concerned with vocational home economics and food services. Those for the boys deal with the repair of agriculture equipment and automotive engines. For all students, academic studies include reading, writing, and arithmetic. These are job-oriented. For example, a spelling lesson for the girls may concentrate on words used in a cafeteria, while arithmetic would include the use of cooking measurements. In a similar manner, the boys' spelling lessons may deal with terms relating to the different parts of a gasoline engine, while arithmetic problems might involve computing mileage or time required to complete a particular farm task.

Three hours of the school day are for vocational work and two hours for academic studies. Classes are kept relatively small, with an average size of 16. This allows students to receive individualized instruction geared to their level of comprehension and rate of performance.

All receive some sort of practical job experience. The girls may work in the school's cafeteria or prepare and serve meals for each other. The boys repair family cars and work on the vocational teacher's farm. About 60% of them are employed part-time at $1.15 per hour.

The training is meant to qualify the girls as waitresses, special kitchen helpers, snack bar workers, etc.; the boys should qualify as repairmen for farm equipment, trucks, and auxiliary engines.

While the academic part of the program is personalized to the needs of the students, some conventional texts are used. These include Food Service Industry and Junior Homemaker. In academic work, texts include Getting Ready for Math and English for Every Day.

E. Administration

The program is partially funded through the Elementary and Secondary Education Act, but receives most of its financial support from the State Department of Vocational and Agricultural Education. The average cost per student per year is $305.26.

While general policies are made by the school board, key control is exercised by the principal. He recommends the hiring of teachers and the size of the budget and seeks the advice of his teaching staff in regard to student activities.

F. Impact of the Program

Any judgment of the success of the program can only be tentative and partial because of the recency of its inception (November 1966), and the unreliability of the statistics provided by the school. However, it can be stated that its impact on participating students, their parents or guardians, and the Negro community has been, by and large, favorable.

Students have shown an improvement in morale and behavior and, according to the school authorities, a slower dropout rate than for the school at large. They find that by being able to keep up with the work of the program, they have a feeling of participation and success that they lacked in regular classes. A dropout rate that is lower than for regular students is entirely credible, for the "dangling carrot" of a waiting job serves as a realistic incentive to stick it out and fulfill the program's requirements. Moreover, the latter are more flexible than stringent, and those persons who attain the basic objectives of the course can receive their certificate of achievement before the end of the prescribed period. None of the boys and eight of the girls had completed the course at the time of our study. One girl was placed on a job as a tray girl; the other seven were scheduled to return to the regular school program.

The data on achievement tests in reading and arithmetic, as determined by enrollment in the program and one year later, **are too small to be truly** representative. It is presented here as only suggestive of overall performance. Reading improvement for 1966-1967 measured .4 and arithmetic improvement .8 for a group of 19 students, whose records were available for both tests.

The state has pledged $250,000 to the school for opening an additional shop facility in September 1968. At that time, both school and program are to be integrated. Moreover, the state government also plans to expand the program and open seven additional centers in September 1968.

G. Qualitative Impressions

Within the framework of limited goals dictated by the nature of the environment, school, and available human resources, the program is a success. It does provide incentives and individualized attention to disadvantaged retarded youth in a typical poor rural Negro community of the deep South. According to the comments of the students themselves, they feel that someone really cares and is interested in their problems. Successful adjustment to further schooling or a new job may well be predicated upon continued proof of concern for them.

Aside from state educational officials directly concerned with the funding of the program, there is no indication that the white community is aware of its existence. It does take cognizance of the school--the local newspaper features a column on it once a month.

It would be desirable for two more teachers to be added to the program's staff in order to provide additional individualized attention to the male students. Moreover, upgrading of both academic and vocational instruction is in order. It is hoped that the opening of a new shop facility and the anticipated recruitment of a new teacher for it will contribute to raising the quality of vocational training.

At this point, it is impossible to conjecture what the impact on the program will be when integrated in the fall of 1968.

H. Comments

It is recommended that efforts be made to recruit teachers for the program who have already demonstrated success in handling retarded, rural adolescent students: that salaries, which now start at $3,500, be raised at least one level to promote such recruitment and that programmed learning be introduced in combination with individualized teaching.

A brief chart summarizing the data obtained and specific characteristics of Case Number 21 follows.

SUMMARY DATA: CASE NUMBER 21

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Southern Rural

2. Type: Special Needs

3. Kind of School: Comprehensive

4. Age of Program: 1 1/2 years

5. Enrollment: 95 ; Males 65% Females 35%

6. Average Age: 17.5 Grades 7 & 8

7. Race/Ethnic: White ____% Negro 100 % Spanish American ____% Other ____%

8. Average Academic Retardation: 3 years

9. Family Income Under $3,000: 100 %

10. Primary Occupation of Heads of Household: Farm

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 16 Basic Education 16

2. S/I Ratio: Vocational ____ Basic Education ____

3. Diploma/Certificate: Certificate of Achievement

4. Number of Vocational Offerings: 2

III. TEST DATA

	Pre-Test		Post-Test	
	Reading	Arithmetic	Reading	Arithmetic
Grade				
N	19	19	19	19
Score	3.9	3.4	4.1	4.2

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 4 % Prior to Program ____% Regular School 7 %

2. Follow-Up Data:

8 graduates; 1 student working in a training related job; 7 students pursuing post-graduate training.

V. COST DATA

1. Annual Cost/Student: $ 305.26

2. Cost/Student Hour: ____

3. Average Annual Starting Salary for Vocational Teachers: $____

CASE NUMBER 26

A. General Description

Case Number 26 was initiated during the summer of 1964 as the only residential MDTA training center for disadvantaged youth in a midwestern state. Its purpose is to train unemployed or under-employed males 16 to 21 years of age from inner-city environments in one of 17 trades and in attitudes that would allow them to compete successfully in the labor market.

The program utilizes a residential training school in a rural setting away from the pressures of a ghetto to provide an easy, relaxed atmosphere conducive to learning. It employs a holistic approach to training. Aside from furnishing students with basic education and vocational training, it gives them medical care, spending money, and positive social and attitudinal indoctrination through counseling.

The school operates on a year-round basis. Its enrollment varies between 400 and 500. The students stay from three to 12 months according to the length of time required in a particular vocational course. Graduates are awarded certificates of completion.

The school authorities work closely with the state employment service to secure jobs for graduating students.

B. Student Characteristics

Applicants must be males, unemployed or underemployed, who meet federal standards for the culturally, economically, or educationally disadvantaged. They come from broken homes and orphanages; they include high-school graduates with minimal academic skills, dropouts, and some with court records.

The racial composition is about 67% Anglo, 30% Negro, 2% Spanish-speaking, and 1% not otherwise classifiable. About 5%-10% have severe emotional problems; about the same proportion are physically handicapped.

Average academic retardation exceeds four years. The average student reads at the seventh grade level; his arithmetic skills are slightly under the seventh grade level. School officials estimate that 10% are functional illiterates. The students have a wide ability range, but the average I.Q. is about 10 points below average.

C. Faculty and Staff

Staff is selected on the basis of job skill, practical ability to teach "on the job," and for successful experience in working with special populations.

The attractive starting salary of $8,500 combined with the close working relationship of affiliated agencies with private industry minimize the usual problems of recruitment. Teaching certification is not required, and vocational instructors from private industry are preferred over experienced teachers from the conventional vocational programs. Even with relaxed formal training requirements, the vocational and academic instructors have good college or advanced training backgrounds.

The staff consists of 23 vocational instructors, 19 basic education instructors, eight pupil personnel specialists, and supportive personnel. The supportive staff includes five counselors, a psychologist, a social worker, five members of the state employment service, two members of the Bureau of Vocational Rehabilitation, doctors and nurses. In addition, there are 56 persons who operate housing, food, and recreational services.

D. Curriculum and Scheduling

By its nature, this program is a cross between an urban Job Corps Center and a high school vocational education program.

Instruction is offered in 17 vocational areas (accounting, auto mechanics, landscaping, maintenance, welding, etc.) identified by the state employment service as having current and future employment potential. A total of 24 sections of vocational training are offered daily, from 7:00 a.m. until midnight.

The instruction is geared as much as possible to individual needs. Average class size is 20. Courses are ungraded so that students may progress at their own rate. The faculty is given maximum freedom to make the curriculum and teaching as flexible and innovative as possible. Team teaching and simultaneous instruction (e.g., where the basic education teacher gives math or reading instruction in conjunction with the teaching of a skill in the shop area), are two devices being used.

As in the Job Corps Conservation Centers, the training is offered in the practical setting of actually doing a useful, productive and visible job. The center trainees have been modifying buildings, doing center maintenance work, repairing motor vehicles on the base, etc. Small groups, repetition of a task until it meets instructor standards, and peer teaching characterize the program.

There is little emphasis on academic training, except as it pertains directly to the tasks being learned and performed. There are no texts, but programmed instruction is offered in reading and mathematics to bring a student to the level needed to interpret maintenance manuals, estimate the cost of doing a job, and perform measurement operations.

The school has excellent library facilities which include, in addition to books and magazines, 116 programmed education courses in a variety of cultural enrichment and practical areas ranging from foreign languages to business letter writing.

As part of the school's attempt to instill positive attitudes and help the students attain maximum personal development, all students receive daily instruction in classes such as improving the environment, family living, and health habits.

During their leisure hours, the students may participate in a variety of team and individual sports and social activities.

E. Administration

The school has a rather unique funding arrangement. The instructional cost of the program is borne by federal funds provided under the Manpower Development and Training Act. A philanthropist donated $250,000 to provide for the cost of the residential and recreational facilities. This aspect of the program is administered by a private non-profit corporation.

It is estimated that it costs $2,800 to handle the average student (16-month stay), from inception to job placement--$1,400 for class instruction and $1,400 for subsistence allowances.

Several state government agencies are cooperating in the day-to-day operation: the State Division of Vocational Education, the State Youth Commission, the State Employment Service, and the Bureau of Vocational Rehabilitation. The latter two have full-time staff people assigned to the school.

The key personnel in the school's administration are the director, the supervisor of vocational education, and the basic education supervisor.

F. Impact of the Program

The program has been quite successful in providing inner-city young males with employable vocational skills. Since it is funded under MDTA, federal law requires maintenance of follow-up records of graduates' post-training employment experience. These show that about 85% are able to find work and that 70% get jobs in the field in which they are trained. School personnel cite numerous examples of behavior and attitude improvement as a result of the program.

The school administers the Wide Range Achievement Test (WRAT) to its students, but does so only once. Therefore, it was not possible to obtain reliable and valid measures of academic progress. School officials agreed to re-test with the Stanford Achievement Test for purposes of this project. The result showed a decline in both reading and arithmetic achievement as compared to the WRAT. The average grade level achievement on the Wide Range Reading was 8.0 and on the post-test (SAT) 7.3, a decline of .7 grade levels. The pre-test and post-test average scores in arithmetic were 7.5 and 7.4, respectively. The average elapsed time between the administration of the WRAT and the SAT is unknown. It is undoubtedly less than a year. It should be noted that the two instruments are not strictly comparable. In fact, the results of this comparison are extremely suspect. Some students declined in their achievement by seven or eight grade levels. It is difficult to believe that any program could have been that detrimental to a student's academic skills.

During the last year, the dropout rate for the program was 26.6%. About half of this is accounted for by the fact that many students come and immediately decide they do not wish to stay. Of those who stay beyond the first few days, the dropout rate is only about 13%. This is still quite high, but is lower than the 48% of the preceding year.

G. Qualitative Impressions

The pleasant, tranquil atmosphere of the school is thought to be conducive to learning and developing such personal qualities as good moral character, the ability to get along with others, the willingness to accept responsibility, etc. The impoverished environments in which many of the students grew up contributed in no small measure to their past behavioral and educational difficulties. Therefore, the implicit philosophy behind the residential school is that if such students are put in the proper environment, they will improve. Several other school administrators contacted in the course of the study, expressed interest in the boarding school approach. Frustrated in their attempts to deal adequately on a 9:00 to 3:00 basis with problems having their roots in the home environment, they view removal of the student from the home as a viable solution.

An amicable relationship exists between the school and the large community nearby. Many graduates are placed with employers in the area. The school has been successful in initiating a work-study program with the cooperation of local employers. About 80 students are currently engaged in this work experience program. Since the school's initiation, there has been only one minor incident in the nearby community involving youth from the school. This was a disturbance one night in the city when several boys on weekend passes from the school were arrested. It was soon determined that the boys from the school had not participated in the trouble but had simply been picked up in the police dragnet.

The school has wisely turned over most enforcement of school rules and regulations to the students themselves. Discipline problems are minimal. Also, the regulations are not unduly rigid. Students are allowed to smoke in their rooms and are freely given weekend passes enabling them to leave the school campus. The school is not much more stringent than most undergraduate colleges.

The program provides an excellent example of inter-agency cooperation. It is desirable to have vocational rehabilitation and employment service personnel working on the educational site in order to provide for better coordination to activities and to avoid duplication of efforts.

There is coordination between the vocational and basic educational teaching with emphasis on the former. The evidence available, however, does not indicate that this effort is having much impact on academic achievement.

It must be noted that this is an MDTA program. The clearly stated purpose of that act is to provide skill training for unemployed workers so they can obtain jobs which the school is accomplishing. The basic education feature of MDTA came as an amendment to the original act. Its purpose was not to offer basic education because literacy is intrinsically good, but rather to provide enough academic ability for the trainee to adequately perform the job for which he was trained. The program does not stress academics to the extent deemed desirable in terms of this study, but this is implicit in the nature and purpose of the Act.

From its inception, the school has attempted to improve its program. Among the changes have been the following:

1. The counseling staff was increased.
2. A part-time psychologist was added.
3. A part-time speech therapist was added.
4. The work-study program mentioned above was begun.
5. A basic skill center was opened for severe reading problems.
6. High school credit is now being granted for work done at the school.

On the whole, the school is functioning as a very successful combination of the MDTA program and a Job Corps-type center. It is fulfilling its stated purpose of getting people ready for employment. The supportive staff is quite comprehensive and is undoubtedly helping many young men make a successful adjustment to life.

H. Comments

The school authorities see several aspects of the program which need improvement. Most of these problems stem from a lack of adequate funds. These problems are:

1. Need for more facilities; the present plant is overcrowded.
2. Need for additional funds for in-service teacher and staff training.
3. Need for allocation of funds for employee fringe benefits.
4. Need for larger student subsistence allowances; the $5.00 per day allotment is not sufficient.
5. Provision for medical check-ups before referral, as many students enroll who are in need of medical treatment.

A brief chart summarizing the data obtained and specific characteristics of Case Number 26 follows.

SUMMARY DATA: CASE NUMBER 26

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Midwestern; Large Inner-City
2. Type: Special Needs, Voc. Educ.
3. Kind of School: Full Vocational Education
4. Age of Program: Over 2 years
5. Enrollment: 400 ; Males 100 % Females 0 %
6. Average Age: 19 Grades Ungraded
7. Race/Ethnic: White 67 % Negro 30 % Spanish American 2 % Other 1 %
8. Average Academic Retardation: 4 years
9. Family Income Under $3,000: ____ %
10. Primary Occupation of Heads of Household: Service; Blue Collar; Farm

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 20 Basic Education 20
2. S/I Ratio: Vocational ____ Basic Education ____
3. Diploma/Certificate: ____
4. Number of Vocational Offerings: 17

III. TEST DATA

	Pre-Test WRAT		Post-Test SAT-(SERD)	
	Reading	Arithmetic	Reading	Arithmetic
Grade or Date			5/68	5/68
N			238	238
Score	8.0	7.5	7.3	7.4

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 27 % Prior to Program 48 % Regular School ____ %
2. Follow-Up Data:

288 Graduates; 199 students placed in jobs.

V. COST DATA

1. Annual Cost/Student: $1,400 (instruction) $2,800 (boarding school) 2. Cost/Student Hour: ____
3. Average Annual Starting Salary for Vocational Teachers: $ 8,500

CASE NUMBER 29

A. General Description

This program encompasses the total curriculum of a regional/vocational center situated in an agricultural area of a mid-atlantic state. This center was singled out for study because of an unusual expansion plan that grew out of special achievements in vocational education and an effective community relations program.

Although education in this area has long been vocationally-oriented, the administrators of the center during the 1967-68 school year concluded that an adult training program should be developed in conjunction with a secondary school curriculum. While this program is not operational, it is expected to begin in the next school year. Meanwhile, there is a separate vocational program for adults, which will not be discussed here. The pattern of development of vocational education at the center is similar to that of many other agricultural areas. As the need for manual farm labor continues to decrease, there is an increasing demand for vocational education in unrelated fields where there are job openings in the community and elsewhere. In meeting this need of the high school students and graduates at the junior high school level, the center has offered an increasingly broad array of vocational subjects in line with the demands of the job market. The administration still is not satisfied with the range of 20 courses, and plans to seek additional resources for expansion. The reflection of changing needs in the high school curriculum has extended into the field of adult education. If the center is to carry out its mission in the community to the fullest extent, then it must also provide pre-employment training for adults who wish to prepare for new occupations. This is especially imperative in an agricultural area which is actively seeking new industry.

B. Student Characteristics

The school is integrated with 6% of the four-year enrollment of 578 being Negro. There are no other minorities in the area.

It is estimated that 20% of the students are from low-income families with an average income of less than $3,000 per year. About 1% had records of delinquency; 47% are female. At least 10% of the students are educationally retarded by at least three grades. The bulk of the students, 57%, are transfers from an academic high school. Transfers or graduates from junior high schools and elementary schools comprise 42% of the enrollment. Students expelled from other schools are excluded, but students with delinquency records, the academically retarded, and girls with histories of illegitimate pregnancy, are admitted.

C. Faculty and Staff

Teachers are hired in accordance with minimum state standards, set by the State Department of Certification. The vocational teachers in the program must have the equivalent of a high school education, plus a minimum of two years experience in the occupational field of specialization, in addition to references from previous employers. Generally, these minimum standards are exceeded by most of the staff members who tend to be highly experienced and trained before joining the program.

The level of teacher competence, as well as the salary scale, is set by the teacher's grade on a national or state trades examination. Starting salary for most vocational teachers is $6,000 for a 185 day year. The notable exception is among the Registered Nurses who teach Practical Nursing; their starting salary is $5,500.

There is no formal in-service training program, although five days of the salary year are reserved for pre-school curriculum and other planning. The classes are large and the school has difficulty in staying within state regulations which limit the number of students that can be taught by one teacher in a day to 150.

The school operates on a seven-period day with academic classes averaging from 25 to "over 30." The business courses also have large enrollments of up to 40 students per teacher, although the shop classes in the trades area are smaller.

D. Curriculum and Scheduling

The curriculum represents conventional vocational education programming, with emphasis on pre-vocational and in-school skill training. This being the case, the work experience aspect is informal and does not affect grades or the diploma program. The academic curriculum is based on minimum state requirements, but the vocational choice is quite broad. The advanced courses are at the junior college level. Courses include the full range of business occupations, including general business, business law, salesmanship, office practice, office machinery, shorthand, and typing. The most popular courses are in agriculture; enrollment is at 110 in farm production, farm mechanics, and horticulture. The three courses in home economics have an enrollment of 102. Other major courses are Distributive Education, 16; Air Conditioning, 32; Auto Body Repair, 28; Carpentry, 23; Cosmetology, 26; and Drafting, 14.

E. Administration

The center is administered by the local school system but plans are being made to offer the center's services on a regional basis. Other resources to operate the program are contributed by the State Department of Education and the community.

F. Impact of Program

Most notable in the program is the development of a close working relationship between industry, the institution, and the community. An effective public relations program keeps the center, its work, and its accomplishments in the public eye. The staff and faculty maintain close personal contact with industry and agriculture interests to assure the continuing relevance of the course work to employer needs. The services and advice of civic organizations and the local Chamber of Commerce are enlisted.

The program graduates 100 students in 1967-68. Of these, 55 were placed immediately. However, the figures do not reflect the actual success of the program. It is reported that a large number of the young male graduates entered the military service, while the majority of a sizable class of home economic majors did not seek employment. Placements in agriculture total 73%, while in air conditioning and auto mechanics, placements were 42%; less than half (40%) of the placements were in training-related fields.

The dropout rate was a low 4%. Half of the dropouts left because the family moved out of the district.

G. Qualitative Impressions

Although the program serves only a relatively small number of the seriously disadvantaged and almost no dropouts, it has an important place in the community. This is one of the middle southern agricultural areas that is still in economic flux created by the decline in agricultural employment. In an area with a large Negro population, the 6% enrollment in the school is low by normal standards, but perhaps shows that the school is moving in the direction where service is available to a greater number of people.

The low placement rate in fields related to training and other statistics indicates that this is an area working to build a skilled manpower base with which to attract new business and industry. The danger is that, with training-related jobs not available in the area, a program of this kind may be encouraging the out-migration of its graduates.

The planned development of an adult pre-vocational program in conjunction with the high school program indicates that the center is alert and responsive to the needs of the area.

H. Comments

Hopefully, a mixed adult situation can be developed in the classroom. Since the adults would be persons motivated to a fresh start and vocational change, they may be excellent models for disadvantaged youth in the program. This Center has been very successful with youth, partly because of an adult/youth mix in the classroom.

Although job opportunities may be limited, the work experience aspect of this program should be bolstered. Perhaps the students can be placed in work situations for a few hours each week, without compensation, if necessary.

A brief chart summarizing the data obtained and specific characteristics of Case Number 29 follows.

SUMMARY DATA: CASE NUMBER 29

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Southern; Rural-Small City
2. Type: Vocational education
3. Kind of School: Full Vocational Education
4. Age of Program: 7-12 months
5. Enrollment: 40 ; Males 53 % Females 47 %
6. Average Age: 16 Grades 9-12
7. Race/Ethnic: White 94 % Negro 6 % Spanish American ___% Other ___%
8. Average Academic Retardation: 3 years
9. Family Income Under $3,000: 20 %
10. Primary Occupation of Heads of Household: Farm

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 10-40 Basic Education 25-35
2. S/I Ratio: Vocational 25/1 Basic Education 35/1
3. Diploma/Certificate: ___
4. Number of Vocational Offerings: 14

III. TEST DATA

Not Available

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 4 % Prior to Program ___% Regular School ___%
2. Follow-Up Data:

55% of 100 graduates placed in jobs; 73% of placements were in agriculture; 40% placed in training-related jobs.

V. COST DATA

1. Annual Cost/Student: $___
2. Cost/Student Hour: ___
3. Average Annual Starting Salary for Vocational Teachers: $ 6,000

CASE NUMBER 37

A. General Description

This program, located in a middle-sized hub city on the Mississippi River was singled out for intensive study because of its broad scope, strong community involvement, and effective use of university resources.

The program was a system-wide effort that crossed school and grade class lines to identify potential dropouts at a relatively early age and enroll them in a series of pre-vocational and vocational classes from seventh grade through completion of high school.

The program was organized by the school district on the advice of a special community commission which was formed in 1962 in response to citizen alarm over the local school dropout rate. At one time, it was estimated that 39.8% of all students entering high school in the area dropped out before graduation. In part, this may have been a reflection of the fact that 28% of the citizens in the county were welfare recipients. At the same time, the city was relatively prosperous, being a regional business, industrial, and cultural center, and there was a shortage of trained manpower.

It is estimated that about 7% of the combined student body of the junior and senior high schools (4,050 students) are enrolled in the 25 special courses under the program. While only the three senior high school grades are involved in actual work training, the academic courses at all levels are oriented toward the world of work and functional employment.

The resources of a nearby university were used to conduct an exhaustive study of the dropout problem and its causes. These were identified as an integral part of program development.

B. Student Characteristics

The students come from a variety of social and economic backgrounds, since they were selected only on the basis of inability to function productively in the typical school setting. Some 95% of those referred to the program were judged to be "dropout prone" on the basis of sophisticated criteria developed specifically for this program by a nearby university.

About 7% of the students in the program are Negro. The age range of the students is from 14-19 years. Previous dropouts, pregnant girls, and teenage mothers are accepted by the program, although no specific figures on enrollees with these and other problems are available.

C. Faculty and Staff

The student/teacher ratio is about 18:1, with the maximum class load set at 22. The instructors are recruited by the project director and selected on the basis of special qualifications designed specifically for the program. Although salaries are comparable to others in the system, instructors are expected to work longer hours. This is, in part, due to the continuous in-service training, but in greater measure to the required home visitation that is written into each job description.

On the average, instructors in the program have eight years of teaching experience; most have advanced degrees, and the average salary is $8,000.

The project director had the opportunity to select any teacher in the school system, so he could be highly selective. It was felt that the experience of a teacher was vital to the success of the program, so new teachers were not accepted. A special stipend added incentive for the top teachers to join the program.

D. Curriculum and Scheduling

Of the 233 students in the program in grades 7-12, 142 are sophomores, juniors, seniors, and specials in job situations. Quality of work and related performance are credited toward a diploma.

The employment locations in the work experience phase include: 17 locations in the community, mostly in the food industry (27 students); a community development program in the automotive services (between 14 and 21 students); a school-centered craft program which teaches 37 skills, such as ceramics and small motor repair; the school store; and three school maintenance operations.

All work is supervised and each student is evaluated on the quality of performance, work attitudes, appearance, and health status.

There are regularly scheduled assessments of each student in such areas as job attendance, desire to increase knowledge, relationship to other workers, and deportment. This evaluation is formalized with a grading system ranging from "1" for excellence through "4" for unsatisfactory performance. No special techniques or texts are used in the program, as observed during the summer session.

One important element in the vocational aspect of the program is the ability and freedom of the students to consult with one another. It is felt that the freedom to move about in the laboratory situation and to share ideas contribute to the progress of the individual student in solving his own problems.

E. Administration

The school system employs staff and instructional personnel, while the aforementioned community commission underwrites operating components through grants and aids. Project director and staff operate in an environment of freedom to experiment and explore. If a program plan or function does not fall into the accepted operating plan of the school board, sanctions are provided by the community commission.

Per capita expenditures for all programs based on a total enrollment of 233 is $962.50 per year. The crafts and automotive training programs are self-supporting. Approximately half the remaining costs for teachers' salaries are abosrbed by the public school system.

F. Impact of the Program

Since the primary goal of the program is retention of the student through completion of high school, placement activity is not significant. It is hoped that the impact of the program would encourage the graduate to enroll in one of the many post-high school training institutions in the area after which it would be relatively easy to enter the local job market. Mobility and job development programs are not considered necessary.

This being the case, the retention rate of 88% pointed to the success of the program.

G. Qualitative Impressions

Operationally, there are many positive aspects to this program. The community and administrative environment in which the program operates is conducive to innovation and achievement. The home visitation procedure required of instructors is excellent since this gives the instructor insight into the needs of his students that would not emerge in the classroom environment.

Recruitment and selection of both students and instructors is highly systematized, in the positive sense. The grade point system for non-academic subjects and intangibles gives status to achievement in the areas that are often minimized, while providing counselors with a record and tangible basis on which to evaluate the further needs of the students.

On the negative side, there are some doubts as to whether this kind of program, effective as it is in reducing the dropout rate in the school system, constitutes "vocational education for the disadvantaged and dropouts." The vocational opportunities offered in the program are quite limited, with most of the jobs being performed in an institutional setting. With the high dropout rate and a large number of families on public assistance in the area, combined with the available job market, this program could perform a greater service by concentrating on actual dropouts and the economically disadvantaged.

The effective organization of the program and the clear definition of its goals were the results, to a great degree, of the contributions by a university team. Record of previous dropouts were studied. Common elements or correlates were identified with high school graduates and high school dropouts. Interviews were accomplished and criteria were established and tested. Criteria for identifying potential dropouts were validated by a study of actual dropouts. Potential dropouts were identified by criteria thus obtained.

H. Comments

This type of program is useful and should be integrated into a total effort by the school system to retain students and reduce the dropout rate through preventive efforts in the earlier grades. However, the vocational investment of the school system should be redirected toward services for the most needy, disadvantaged dropouts to lead them toward self reliance, job readiness, and training in a marketable skill.

A brief chart summarizing the data obtained and specific characteristics of Case Number 37 follows.

SUMMARY DATA: CASE NUMBER 37

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Small midwestern city-suburban
2. Type: Work-Study
3. Kind of School: Comprehensive high school
4. Age of Program: Over 2 years
5. Enrollment: 233 ; Males 55 % Females 45 %
6. Average Age: ____ Grades ____
7. Race/Ethnic: White 93 % Negro 7 % Spanish American ____ % Other ____ %
8. Average Academic Retardation: 1 years
9. Family Income Under $3,000: ____ %
10. Primary Occupation of Heads of Household: Blue Collar

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 15-22 Basic Education 22
2. S/I Ratio: Vocational 18/1 Basic Education 18/1
3. Diploma/Certificate: Regular High School Diploma
4. Number of Vocational Offerings: (Work-Study only)

III. TEST DATA

Not available.

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 4.3 % Prior to Program 39.8 % Regular School 7 %
2. Follow-Up Data:

Not available.

V. COST DATA

1. Annual Cost/Student: $ 962.50
2. Cost/Student Hour: ____
3. Average Annual Starting Salary for Vocational Teachers: $8,000

CASE NUMBER 4

A. General Description

The vocational program described here is operated by the public school system of a large city in a border state. Initiated in 1963, the program provides what is called "A Job Preparatory Curriculum" for "the slow learner who desires to remain in school beyond the ninth grade." The students and staff are predominently Negro. Other programs are operated in the city for white students.

It was impossible to find an exact definition of "slow learner" from members of the program staff. Some of the students are physically and mentally handicapped. Others are retarded because of social and environmental factors. Still others, apparently, are placed in the "special curriculum" programs after years of a "passive attitude," or because they are hostile or indifferent toward school.

Similarly, the specific content of "special curriculum" courses could not be pinpointed. The principal of the school was vague in referring to both terms. Apparently, special curriculum classes are watered-down versions of academic classes and are considered as "holding-type" operations.

The program has three broad objectives. First, it serves low ability students 16 years and older, who have completed the ninth grade in a comprehensive junior high school or in a special curriculum junior high school. Second, it provides training for "service occupations" commensurate with the abilities of the enrollees. Third, it makes an attempt to locate employment "for all eligible, employable" trainees.

A student entering the program may remain for two years, through the tenth and eleventh grades. At the close of this period, the student receives a certificate of completion.

The city in which the program is located is in the top 10 in the nation in population, with just short of 1,000,000 in 1960. An old port terminus, the city also has a substantial economic base of manufacturing and of retail trade. The central city from which most of the students of the program are drawn, has changed from pleasant one-family dwellings to overcrowded tenements. A high proportion of the city's population is Negro (about one-third), and the area surrounding the program facility is almost completely a Negro neighborhood.

B. Student Characteristics

The school's 330 students range in age from 16 to 20, averaging about 17.5 years. Only 1% of the students are white; boys predominate (63% to 37%). The I.Q. range is 56-87, with half the students scoring under 75: the average I.Q. is 70.5. Average mathematics and reading levels are at the fourth grade. Some 75% of the students are from families in the low income category (below $3,000 a year), and many are from families receiving welfare.

Severe emotional problems are found in about 1% of the student body, and most all the students have minor emotional problems. About 1% are physically handicapped and have been referred to the state agency for vocational rehabilitation.

C. Faculty and Staff

The school employs a principal, a job coordinator, 24 full-time teachers, one part-time physical education teacher, one counselor, a librarian, and a nurse. The faculty and staff of the program are predominantly Negro. Regular staff meetings are held once a week to coordinate program resources and to bring attention to bear on problem cases. No regulated or structured in-service training program exists for the upgrading of staff.

Each teacher has earned at least 18 credit hours in vocational education, in accordance with state standards. Vocational instructors need not have bachelor degrees, but they must have experience in their particular vocational area. Generally, the staff members have had at least five or more years of experience. Advanced study is generally left up to the individual teacher.

Teachers are allotted a 40-minute planning period every day as well as a 40-minute lunch period. The student/teacher ratio on June 1, 1968, was 14 to 1 at the end of the 1967-68 school year after an appreciable dropout of enrollees. At the beginning of that school year, with 554 enrollees, the student/teacher ratio was 23 to 1.

Starting salaries for vocational teachers in the program are the same as for academic teachers in the city school system, and range between $6,000 and $6,500 annually.

The teachers have very close relationships with the students, being highly accessible during school and after hours. Students may reach their teachers in the cafeteria at lunchtime and during breaks. The atmosphere is informal. When necessary, teachers and the principal make home visits to handle truancy and other problems. It is unique that truancy and its control are the responsibility of the individual teachers.

D. Curriculum and Scheduling

Academic instruction at the school has a "practical" orientation designed to help the student become a responsible and productive citizen in the context of the local community. The social studies program, for instance, has a curriculum focused on the geography and government of the community. A multi-text approach with special materials from the Chamber of Commerce, bank publications, etc., are used. And students are informed of community problems and resources; e.g., legal aid, health services, welfare programs, etc. Language arts and mathematics curricula are planned with prospective job and family responsibilities of the enrollees in mind. The school also has a "job training" course in which students learn how to fill out applications, what to expect in a job interview, and the like.

Unlike the practice in other secondary schools in the city, students enrolled in this special needs program are free during lunch periods. They have the choice of eating in the student-managed cafeteria or in the community. About half the students eat in the cafeteria.

Students have a drama group and produce a yearbook. Other extra curricular activities include basketball, the Y-Teens, and special interest clubs. Substantial participation indicates student interest in these activities.

E. Administration

The principal for the program is directly responsible to the Director of Vocational Education for the public school system of the city.

The annual cost per student of the program is estimated at about $475. This compares to an annual expenditure of $330 per student in a regular vocational program and $410 spent per student in the general academic program of the city's secondary schools. The program is supported from local funds, supplemented by funds under the Vocational Education Act and the Elementary and Secondary Education Act. Exact figures on funding sources were not available.

The supporting services of the program are adequate. Teachers readily make home visits, consulting with parents and students to identify the causes of long pupil absences from the program.

The physical plant for the program is ancient and outmoded; the building was constructed in 1874. Yet, a commendable spirit of pride and cooperation between staff and students contributes to keeping the facility clean and neat. The school principal feels the program has been neglected by the school system insofar as receipt of facilities and services were made available to other public schools in the city. For example, he has requested the addition to the staff of a social worker and a psychologist, but both requests have gone unmet. Apparently, the schools with white "slow learning" students get higher priority.

F. Impact of the Program

The program has made sustained efforts to interpret its purpose to parents and to involve them in school affairs, if not in policy matters. Note has been made of the home visits by school staff members; further, parents are invited to individual consultations at the school. A fairly large and active PTA has more than 150 members. Visual aids have been developed to illustrate elements of the program in community meetings. Every year, a two-day orientation program is offered to the parents and other interested persons to describe program objectives, student schedules, the work experience program, etc.

The area surrounding the school has had some social unrest and residents have been involved in campaigns for social change. The park facing the school was used as a meeting place for participants in a Solidarity Day demonstration in mid-June, 1968.

The dropout rate of the two-year program is abnormally high, with but 60% of the students receiving the certificate of completion. The enrollment in September 1967, was 554; by June 1968, it had dropped to 330. The heaviest dropout is during the first year. Poor attendance plagues the program; classes programmed to accommodate 30 students have an average attendance of 20-25.

Academic achievement is limited. The average reading score on the Metropolitan Achievement Test for 80 students was 3.5 in September 1966. A year later, the same 80 students had an average of 3.8. Pre and post-test scores for arithmetic computation and problem solving did not reflect much gain. For arithmetic computation, 80 students scored 4.8 in September 1966, and increased to 4.9 by September 1967. The achievement level in arithmetic problem solving advanced from 4.2 to 4.6 during the same year.

However, according to the principal, students showed marked improvement in personal responsibility and in attaining positive job attitudes. Evidence supporting this improvement is obviously subjective. The principal spoke of students who were at first dull and lacking in initiative, but who emerged eager to work and excel. He related, at some length, the story of a student who had never been concerned about his four brothers and sisters nor about his grandmother who supported all of them. This student, he said, had satisfactorily adjusted to school, had been placed on a job, and is now contributing substantially to the support of his family.

A high placement record is claimed for graduates of the program. However, this is open to serious question. The principal reported that 97 of the 152 graduates in 1968, or 64%, had been placed as of June 21, 1968. He predicted 90% would be placed before August of the same year. Placement information appears to be limited to initial work assignments following graduation, and there was little or no effort at follow-up supportive services. The staff felt that the latter was impossible, though desirable, without additional professional personnel.

G. Qualitative Impressions

The administration and faculty of this special needs program are doing a most creditable job, with less than substantial facilities and staff. This is one program where poor facilities, equipment, and supporting services affect success. Professional competence and commitment are evident among the teachers, the supportive personnel, and the school principal. Teacher involvement in the student enterprise is characterized by patience, understanding, and persistence. And it is apparent that those staff members of the program who are black identify positively with the black student.

However, the school personnel seem to believe that the program enrollees, because of serious academic retardation and lower intelligence quotients, are generally incapable of profiting from skill learning above unskilled or semiskilled levels. It was the impression of an observer of the program that there is a failure by the staff to distinguish the culturally retarded student from the mentally retarded student and to offer the former skill training at higher levels, as well as appropriate remedial general education.

Each student is exposed to 11 occupational groups, ranging in skill level from the unskilled to the semi-skilled. These are:

- Customed Services *
- Duplicating Services
- Family Services **
- Food Services
- Home Mechanics *
- Lawn and Flower Care
- Painting and Decorating *
- Shoe Repair *
- Retail Services
- Small Appliance Repair
- Valet Service

(* Boys only; ** Girls only.)

During the first year, students are exposed to at least eight occupational areas. The nine-period day, beginning at 8:40 a.m. and ending at 3 p.m., provides 40-minute periods. A typical first-year student's schedule would be:

Class Period	Course
1	Language Arts
2	Mathematics
3	Social Studies
4	Job Training
5	Lunch
6	Physical Education/Music (on alternate days)
7	Science
8-9	Shop Courses

All course work is characterized by flexibility and adaptability and paced on an individual basis for the pupils. The school policy is to give the students broad and varied occupational experiences, with a job ladder built into the program to enable them to move earlier and more successfully from, for example, duplicating services to retail services because they have learned the basic techniques of holding a job and have acquired skills in coordinating their minds and hands.

During the second year, most students are involved in a work-study program throughout the year. Two weeks of study is alternated with two weeks at a work station in the community. A typical daily schedule during the two-week school periods would be:

Class Period	Course
1	Language Arts
2	Mathematics/Science (on alternate days)
3	Social Studies
4	Physical Education/Music (on alternate days)
5	Lunch
6-9	Shop Courses

Central and continuing deficiencies of the program are its high dropout rate and poor attendance record, as described here earlier. While the program personnel are sensitive to these problems, there appear to be neither plans nor actions to correct the deficiencies. Large classes and limited personnel for both in-school and out-of-school pupil support are contributing, if not determinative, factors here.

The project observer felt that existing staff could and should study these problem areas, with the view of possible improvement of the curriculum and other activity programs of the school. For example, the fact that the retention rate of the program is much higher during the second year, with its work experience and wage stipends, suggests that moving these program features into the first year may help reduce the dropout of enrollees during the period.

The limited academic increment among program enrollees, as reflected in test data, has been delineated. Here again, analysis should be made as to the relevance and format of curricular material and teaching methods. Staff evaluation should be encouraged or required by the program administration, with a view toward effective academic programming, at the school.

The principal, the teaching staff, and the supportive personnel discern positive behavioral changes on the part of students who remain in the program. But there are neither systematic nor substantial data to support this conclusion. The addition of a school psychologist might prompt and produce more attention to and more information about behavioral problems of the students and more purposeful and productive remedial programs.

It has been observed that information concerning the placement of program graduates is limited to initial placement. The absence of placement surveys and analyses over a period of time denies to the program the feedback information necessary for curriculum evaluation and improvement.

The pre-conceived expectation patterns which the staff have of these "slow learners" and staff failure to distinguish the varying potentials among the enrollees (e.g., those who may be culturally, rather than mentally retarded) for academic enrichment has resulted in the uniform "starving" of the curriculum of remedial academic content. Academic studies are watered-down, poorly-articulated with the skill training, and there is little opportunity for students to grow academically and move into a regular vocational program or pre-college curriculum. The tenth grade level does have a type of prevocational program, oriented toward the local labor market, but the perspective and scope of this program are limited to unskilled and semi-skilled service occupations. The student who remains in the program beyond his first year has the opportunity to earn income in the work experience phase and, if he continues through the second year, receives a certificate of completion. The program is deficient in: the lack of variety in skill offerings, lack of periodic up-dating of these offerings and of the training equipment. The program does not continue beyond the eleventh grade, and the size of the vocational classes, i.e., 23-25, is above the recommended maximum of 15. There is a high initial placement record, but no program of supportive services beyond this point; there is a recognition of the response to the special needs of mentally and physically retarded enrollees; and each of the teachers doubles as a counselor and job developer. A professional guidance counselor is also available. Finally, there appears to be an effective and productive dialogue between the program, its enrollees, and their parents. Thus, the predominantly Negro faculty identifies well with the black students, has positive attitudes of acceptance, if not positive expectations for the enrollees, and is supported with good supervision and administration by the school principal.

H. Comments

The basic causes of the retardation of the program enrollees should be ascertained, carefully and professionally, and appropriate changes made in both academic and vocational phases to recognize varying potentials among the students for personal and skills development. And, in any case, the academic and vocational phases of the program need to be strengthened.

Consideration should be given to including a work experience phase with wage stipends in the first year of the program to aid in retaining students during this period of maximum dropout. Also, if possible, the program may well be extended into the twelfth grade, with a program more equivalent to a regular vocational program. Above all, this program needs more support from the school system.

A brief chart summarizing the data obtained and specific characteristics of Case Number 4 follows.

SUMMARY DATA: CASE NUMBER 4

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Large Northeast Inner-City
2. Type: Special Needs
3. Kind of School: Full-term vocational
4. Age of Program: over 2 years
5. Enrollment: 330; Males 63 % Females 37 %
6. Average Age: 17.5 Grades Ungraded
7. Race/Ethnic: White 1% Negro 99 % Spanish American ___% Other ___%
8. Average Academic Retardation: +4 years
9. Family Income Under $3,000: 75 %
10. Primary Occupation of Heads of Household: Laborers

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 23-35 Basic Education 23-25
2. S/I Ratio: Vocational varies Basic Education varies
3. Diploma/Certificate: Certificate of Completion
4. Number of Vocational Offerings: 11

III. TEST DATA

	Metropolitan Achievement Test			
	Pre-Test		Post-Test	
	Reading	Arithmetic	Reading	Arithmetic
Grade	11	11	12	12
N	80	80	80	80
Score	3.5	4.8	3.8	4.9

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 41 % Prior to Program 41 % Regular School 41 %
2. Follow-Up Data:

64% placement rate

V. COST DATA

1. Annual Cost/Student: $ 475
2. Cost/Student Hour: 49.4¢
3. Average Annual Starting Salary for Vocational Teachers: $ 6,000 - $6,500

CASE NUMBER 6

A. General Description

The program described here is the largest public vocational program for mentally retarded secondary students in the United States. It is operated cooperatively with a State Division of Vocational Rehabilitation. This program is noteworthy as a possible model for others in the nation for skill training of the mentally retarded at the secondary level.

The school system is that of a large industrial city in the northeastern United States, with a population of over half a million, a non-white population of 13.4% (somewhat above the national average), a proportion of low income (i.e., an annual income of less than $3,000) families of 17.3% (somewhat below the national average), and with a substantial mixture of Eastern European national groups.

Traditionally, the city has had an economic base as a port and rail transfer terminus, but during and after World War II developed into a substantial manufacturing center, with a number of the newer industries such as aerospace and electronics.

The special needs program is entitled "Work Experience Program for Secondary School Mentally Retarded Students," and is described as "a bridge to enable the mentally retarded pupil to make a successful adjustment between the school situation and the world of work." The program began on a pilot basis in one high school in 1964, with mentally retarded students, who were enrolled at the twelfth grade level spending a half-day in school and a half-day on the job in the local commercial, service, or industrial community. The jobs were secured by a teacher-coordinator. The special classroom teachers devoted a large proportion of instructional time to assisting students to face and solve problems encountered in the work experience. An interview, a psychological examination, and a medical examination were required before job placement. The State Division of Vocational Rehabilitation (DVR) cooperated by providing case workers to aid in job placement and in the investigation of the safety and suitability of the training situations. A training fee was paid by the DVR to the cooperating employers, and this fee, in turn, was paid to the participating student in the form of wages.

The pilot program was so successful in changing pupil attitudes and in improving school attendance and conduct that it was extended to a second high school in the 1966-67 school year. During the summers of 1966 and 1967, six teachers met and developed a four-year curriculum in vocational education, and this curriculum has become the basis of the city's secondary school program for the mentally retarded. During the 1967-68 school year, this program was in operation in all 12 secondary schools in the city. This program is unique among vocational education programs for the mentally retarded in U.S. secondary schools because of its comprehensive, decentralized, city-wide character.

B. Student Characteristics

During the 1967-68 school year, there were 152 enrollees in the program, 70 at the "level of grade 12" and 82 at the "grade 11" level. About 65% of the students were male, and about 41% were Negro; 2% were Spanish-speaking students.

Little information was available relative to the home background of the enrollees. The primary occupation of parents of the enrollees was reported to be equally divided between white collar, blue collar, and service trades. The dominant behavioral characteristics of the enrollees were their limited expectation patterns and generally low levels of self-esteem.

C. Faculty and Staff

The program staff during the 1967-68 school year consisted of a program supervisor at a salary level of $10,450, six teacher-coordinators with an average salary of $7,000, one visiting teacher at $7,675, one guidance counselor at $7,675, plus clerical assistance. The starting salary for program teachers was $6,580. All of the teacher-coordinators were certificated by the state as special education personnel and were recruited especially for this program. This entails obtaining a bachelor's degree with educational specialty areas and course work in special education. This program has found that recent graduates are somewhat less successful than experienced teachers. The new teacher does not have a good concept of what is required for special education classes.

The success of this program is mainly due to the efforts of the city coordinator who conceived, initiated, and currently operates the program. He has received strong support from the superintendent.

Under Title III of the Elementary and Secondary Education Act (ESEA), the Division of Instruction of the school district has established a Demonstration Center for Teachers of Mentally Retarded Children. A total of 70 students of various racial, social, and economic backgrounds have been organized into classes taught by demonstration teachers. All newly appointed teachers of mental retardation classes must spend up to one week observing and teaching under master teacher direction at the center. In-service training, then, has been accomplished through periodic short courses, regular staff meetings, and consultations with Division of Vocational Rehabilitation personnel.

D. Curriculum and Scheduling

Class size in the regular school program varies from 25-30. Further, the state has a mandated class limit of 21 for special education programs. The average class size for this special needs program during the 1967-68 school year was 18 in the vocational classes and 18 in the basic education classes. The senior enrollees were each assigned to a teacher-coordinator, with a top case load of 10 for each teacher-coordinator.

A student entering the secondary program is enrolled in a four year curriculum. Each year constitutes a separate phase planned to develop the pupil's potential and to prepare him to take part in the world of work. Students progress through the four phases at their own speed.

Phase I serves as an orientation period during which the student learns to adjust to the school surroundings. He learns to follow a rigid schedule, gains poise and self-control, generally becomes familiar with the world of work, gains competence in the basic skills, learns to recognize and accept his own limitations, is introduced to job opportunities available and how to apply for them, and learns the importance of getting along with others.

Phase II serves a dual purpose. It is basically an extension of Phase I, but also includes a detailed description of the occupations available in the local community, units on how to get a job and to hold it, and preparation for in-school and out-of-school work experience. The student learns to use the basic skill subjects to help him function independently. He also is taught the geography and government of the local community. Field trips are the major vehicle of instruction.

Phase III includes an in-school work program as an introduction to further work experience. This phase is a prerequisite to Phase IV. The student uses the basic skill subjects to help him in various job situations within the school environment. He receives training necessary to be self-sustaining.

Phase IV moves the student from a school situation into the community for job experience. He continues to participate in classroom experiences correlated with the community jobs and receives further training in basic skill subjects. The materials used are primarily elementary level texts, and tailormade instructional packages. Half the student's time is spent in school and half in the community, with a typical pattern of 20 hours a week of work experience over a period of 30 weeks. The time in school is devoted to understanding and solving problems in the work experience. The aim of this phase is to prepare the student to gain the proper skills to retain a job after completion of the four-year program.

One of the most unique and impressive features of this program is the fact that it operates in each of the 12 secondary schools of the city. The special education teachers are assigned to supervise and assist the basic and vocational education courses of the mentally retarded enrollees at each grade level. However, the enrollees are also included in regular classes of special area subjects such as Basic Art, Homemaking, Industrial Arts, General Music, etc. This practice contributes to making the special program realistic, functional, and interesting. Moreover, the enrollees of the special program are permitted and encouraged to participate in extra-curricular activities and clubs, where their interests and competence permit such participation. This practice aids in the acceptance of the special curriculum by both its enrollees and the regular pupils.

A senior mentally retarded student goes through the following steps before being admitted to the off-campus work experience program:

1. The student is interviewed by a teacher-coordinator, and the pupil's permanent records are reviewed to ascertain his abilities and aptitudes. Classroom teachers are also asked to evaluate the student in social skill areas.

2. A medical examination is required, to insure physical ability and to identify any physical limitations. The costs of this medical examination are borne by DVR.

3. An individually-administered psychological examination is given, as well as a total battery of educational achievement tests. A teacher-coordinator helps the student to obtain a Social Security number and, if necessary, working papers.

4. A parental conference is required, to explain the program and its operation to the parents of a student. Most of these conferences are accomplished in a group, but individual conferences may be scheduled where it appears useful or necessary.

5. A teacher-coordinator always takes the student to the job initially.

6. Evaluation of the student's needs and progress is made bi-weekly by the coordinator and a complete record is maintained in the central office file. The DVR representative also visits the student and the training employer for evaluative purposes.

7. A field representative of the State Employment Office also interviews the student and activates a file for possible use in job placement in the future.

E. Administration

This special needs program for mentally retarded pupils at the secondary level is under the direct supervision of a Supervisor of Education for the Mentally Retarded in the Division of Instructional Services of the city school district. The program is supported from Federal, state, and local school district funds. A grant under the Vocational Education Act of 1963 (PL 88-210), underwrites that portion of the district-wide vocational education dedicated to the enrichment of the mentally retarded enrollees. During the 1967-68 school year, some $45,000 of DVR funds were made available to reimburse the cooperating employers with training fees which, in turn, were distributed to the participating students in the form of wages by the employers. From the inception of the program in 1964 until March 31, 1966, the training fee paid to the employer by DVR for his training service was at the rate of 100% of the minimum wage; i.e., $1.60 per hour for 20 hours each week. Since April 1, 1966, the reimbursement rate has been two-thirds of the minimum wage; the remaining one-third is paid by the employer. This failure to reimburse at the 100% level has made the retention of training and work situations more difficult, but apparently not unmanageable.

The off-campus work experience program continues for 30 weeks. The estimated annual program cost per student is $945.00.

F. Impact of the Program

After the two-year pilot program, many inquiries were received from parents of mentally retarded children in other secondary schools requesting the establishment of the special program in their schools. Parents were convened in informal meetings in two of these schools and they expressed strong approval of the four-year curricular program and recommended its extension to all of the secondary schools in the district. However, there is no report of parent advisory committees operating continuously at each of the secondary schools.

The holding power of the program appears remarkably strong. Whereas the dropout rate for mentally retarded secondary school students was 29% in the year immediately prior to the initiation of the program, the average dropout rate during the past three years of the special program has been but 1%. Furthermore, there has been a marked increase in the attendance record of participating pupils and in their conduct and effort ratings, as contrasted with the years prior to the program's inception.

It appears that both the students and their parents approve of this special work experience program. The mentally retarded students are anxious to enroll for two reasons: first, to obtain the wage stipend, and, secondly, to leave the regular school program and its pattern of failure for them. With but few exceptions, the parents see the program as a marked improvement over the previous situation; a few parents, however, insist that their children should be "educated," not trained vocationally. A few parents have been fearful of having their children travel to and from the work stations, but these fears are dispelled early in the work experience of the student.

There is an amount of anecdotal testimony by teacher-coordinators and by school administrators that the program has contributed to substantial behavioral change in the pupils; i.e., enhancement of a sense of self-assurance and self-respect, a more positive attitude toward school and toward the learning process, and improved deportment and discipline.

Unfortunately, there is a lack of hard data to measure the educational achievement of the program, either in the classroom or at the work station. Though I.Q. and achievement tests are administered by the school system, no systematic or standardized I.Q. and achievement pre and post-tests are available. In most instances, during the 1967-68 school year, post-testing was accomplished for the enrollees in the program, but there were no entry benchmarks or pre-tests to permit the measurement of educational increment.

Finally, no systematic follow-up surveys have been made to evaluate the work experience of the enrollees following completion of the program. However, almost 100% of the initial placement is accomplished through the joint efforts of the program staff, the representatives of DVR, and the field representatives of the State Employment Service. It may be assumed that DVR gives supportive services to these program graduates as indicated and required, although there is no evidence that this is in fact the case. The staff is keenly aware of this lack of proper follow-up surveys, but with the absence of additional funds and personnel, they find it impossible to undertake this assignment.

G. Qualitative Impressions

This special needs program appears to have few if any recruitment problems; the program appears to be well-accepted by enrollees and parents alike, efforts are being made to minimize program stigma in the eyes of both the enrollees and the regular pupils of the school district. This goal appears to be an achievable one in this particular city, since it is a predominantly industrial city with industrial work expectations dominant among both regular pupils and enrollees in the special needs program. In short, the program does serve the vocational and educational needs of the mentally retarded. In addition, it has shown an impressive improvement in holding power and student attitude.

While there is no systematic and standardized pre-testing and post-testing to measure increments in basic and vocational education, there are evaluations of the individual enrollees. An evaluation sheet, listing ten factors under the heading of "General Abilities and Work Habits," nine factors under the heading of "Work Production," and five factors under the heading of "Social Attitudes," is filled out for each enrollee twice a month by his teacher-coordinator. Semi-annually, these evaluations are compiled to note profiles of progress or to point up problem areas. Also, all contacts with the employer at the work station are reported consistently on a pupil personnel record, with a capsule evaluation at each visit by both the employer and the teacher-coordinator. These records permit and encourage the professional staff of the program to note progress or the lack of progress on the part of individual enrollees and to take any remedial action indicated. These records also facilitate more effective correlation of classroom basic and vocational education with experiences at the work station.

Academic studies are given commensurate weight with vocational studies, students may study at their own rate of speed with a schedule flexible enough to allow for emphasis on areas of need as indicated in the work experiences, classes are small enough to permit effective learning, and academic studies appear to be well-integrated with the vocational studies. However, due to the special character of the clientele in this program, it is understandably impossible for the students to pursue pre-college and vocational studies simultaneously.

There appears to be a strong pre-vocational program during the first three years, providing opportunity for the enrollee to explore different occupations prior to his election of skill training. Secondly, the entire program is well-oriented toward the labor market through regular consultations with employers, representatives of the DVR, and field representatives of the State Employment Service. Third, the eleventh and twelfth grade elements of the program are well articulated. Fourth, there is an opportunity to earn income while learning. Also, the student receives academic credit for the work experience and earns a certificate of completion when he has completed the entire program. However, there are two factors in which the program must be rated as somewhat deficient. There appears to be need for periodic updating of the skill offerings and more investment in training equipment; these are "cost" items, dependent upon available funds.

There appears to be adequate counseling support through the teacher-coordinators, who double as counselors, and through the specialized guidance counselor. However, in this respect, questions may be raised as to the wisdom and operational feasibility of expecting the teacher to be, at one and the same time, a teacher, a program coordinator, a job developer, and a counselor. There also appears to be a very positive placement record with program graduates, at least so far as initial placement is concerned; however, as noted earlier, there are no longitudinal follow-up surveys to indicate success in job retention or to measure the long-term effectiveness of the training program.

Teacher attitudes toward the mentally retarded students appear to be quite positive. Second, there appear to be good teacher-principal-city coordinator relations, with proper emphasis on the supportive role of supervision at all levels. Third, as noted, the systematic evaluation of each enrollee provides a system of feedback by which the student's performance on the job may be more adequately and effectively correlated with his curricular efforts. The fourth factor, i.e. a racially integrated faculty, cannot be assessed at this point, since the racial distribution of the professional staff is not known for each of the 12 schools.

With regard to "student behavior," this special program appears to score well. The phenomenally low dropout rate of 1% annually compares and contrasts most favorably with the 9% dropout rate for the school system. Although hard data cannot be offered to indicate a high level of student achievement, the impression is that the students are well-motivated, for a variety of reasons, and progress sufficiently to function independently in the work world.

H. Comments

The curriculum and offerings should be periodically up-dated:

1. To meet the changing needs of the job market.

2. Through consultation with industry, there should be a periodic up-dating of the training equipment used in the classroom.

3. An effort should be made, through increased staff and reduced case-loads, to bring the class size for the vocational education classes down to a recommended minimum of 15.

4. A systematic and standardized testing program should be developed by the staff, not only for the evaluation of the educational achievement of the program, but, more importantly, to permit self-evaluation by the student, together with the teacher-coordinator, of his progress toward goals of independence and full development of his intellectual and motor potentials.

5. If the parents and community are to reinforce the efforts of the program, they should be well-informed of its objectives and activities, through a more effective dialogue with the program.

A brief chart summarizing the data obtained and specific characteristics of Case Number 6 follows.

SUMMARY DATA: CASE NUMBER 6

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Northeast; Large Inner-City
2. Type: Special Needs
3. Kind of School: Comprehensive; Full Vocational Educ.
4. Age of Program: over 2 years
5. Enrollment: 152; Males 65 % Females 35 %
6. Average Age: ____ Grades 11-12
7. Race/Ethnic: White 54 % Negro 41 % Spanish American 2% Other 3 %
8. Average Academic Retardation: 4 years
9. Family Income Under $3,000: 17.3 %
10. Primary Occupation of Heads of Household: Wide range.

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 18 Basic Education 18
2. S/I Ratio: Vocational ____ Basic Education ____
3. Diploma/Certificate: Certificate of Completion
4. Number of Vocational Offerings: Work Experience.

III. TEST DATA

	Metropolitan Achievement Test	
	Reading	Arithmetic
Grade or Date	6/67	6/67
N	70	70
Score	3.9	4.5

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 1% Prior to Program 29 % Regular School 9 %
2. Follow-Up Data:

Not available.

V. COST DATA

1. Annual Cost/Student: $ 945
2. Cost/Student Hour: ____
3. Average Annual Starting Salary for Vocational Teachers: $ 6,580.

CASE NUMBER 8

A. General Description

This vocational program for disadvantaged boys dates back to 1938, and the building that houses the program is still older, having been constructed in 1890.

The school and program are located in a Negro ghetto of a large midwestern city. The area surrounding the school once was one of the finest residential areas of the city, but now it is the scene of blight and social unrest. In a serious racial disturbance in 1967, a woman was killed in front of this school. The area is considered by the program staff as "psychologically detrimental" to the program enrollees' ability to learn.

When, from 1927 to 1938, the school was operated as "an adjustment" school for grades 1-12, serving the entire city public school system, it was known as "a bad boy's school." In later years, its mission was redefined as an "occupational school for boys incapable of coping with the traditional junior and senior high school curricula." To this day, the school is trying to overcome the "bad boy" image.

The school operates a six-year program for boys, grades 7 through 12, from the 55 public and parochial schools of the city. The two major goals of the program are: "The facilitation of academic rehabilitation" and "the acquisition of marketable skills" on the part of the students.

The general objectives stated by the school officials are:

1. To give each boy the opportunity to succeed at his level.
2. To furnish individual guidance.
3. To develop useful occupational skills and provide specific job training.
4. To correct deficiencies and improve skills in English and mathematics.
5. To develop an interest in desirable leisure-time activities.
6. To train for citizenship by providing information and the opportunity to participate in school activities.
7. To develop wholesome attitudes which will enable young men to get along with other people.
8. To help each boy better understand his environment.
9. To develop intelligent consumers.

The regular school year consists of two semesters. Beginning in 1967, with Title I ESEA funds, a summer program was added for mentally and functionally retarded in cooperation with the Bureau of Vocational Rehabilitation.

B. Student Characteristics

The total enrollment in the two semesters of the 1966-67 school year was about 1,000 students in grades 7 through 12. Nearly 125 of these students were enrolled in five special transition classes designed for students in either the seventh or eighth grades who had been passed out of the elementary schools because of age rather than ability. About 80 students were in the Occupational Work Experience Program, a cooperative work program for grades 11 and 12. The remaining students were distributed among the other in-school academic and vocational courses and shops.

All but about 1% of these students were Negro. Some 85% were from a low income family, i.e., with an annual income less than $3,000.

The following characteristics are found among the school enrollees: an average I.Q. of about 75, retardation of one and one-half to two years or more, a history of behavioral problems and emotional disturbances, a record of academic failure in the regular schools, serious reading retardation, social maladjustment, a dislike of school, a tendency to drop out, school truancy, inability to profit by training for skilled occupations or to prepare for college, cultural deprivation, economic disadvantage, and the products of broken homes. In addition, about 5% are physically handicapped.

C. Faculty and Staff

The school has a principal, an assistant principal, a program coordinator responsible for the "ancillary services", about 50 teachers, three "non-certified" (i.e., sub-professionals indigenous to the community) advisors, two non-certified home visitors, and a part-time staff consisting of a physician, nurse, dentist, dental hygienist, medical aide, speech therapist, and psychologist.

Less than one-fourth of the teachers have a permanent teaching certificate; most hold a four-year provisional certificate, and a number are recent college graduates. No special training is expected of the teachers. Several orientation sessions are conducted early each year for new teachers, in proper class preparations, lesson planning, teaching techniques, and pupil motivation and control. These sessions are conducted by the principal, the assistant principal, department heads, and experienced teachers. Faculty meetings are held on the average of once each six weeks for a review of school policies, explanation of new procedures, or for information purposes. No in-depth or regular in-service program exists for faculty up-grading. Most of the staff, especially those in senior positions are white.

The salary for beginning teachers at the school is $6,200 per year. The average size of both the academic and vocational classes the past year was 16.

D. Curriculum and Scheduling

In the six-year total program, six general activity programs may be distinguished.

1. Transition Classes and Ninth Grade

The seventh and eighth grade students are organized into five transitional classes. A team leader and three teacher aides are assigned to work with each of these classes, which average 22-23 students. Special remedial basic education courses are offered, with flexible and programmed materials and extensive use of audio-visual aids; Title I ESEA funds have been employed to up-date and expand these teaching aids and materials, including: The Didactor, a programmed learning machine; The Controlled Reader; The Language Master; The Tachistoscope, and Tele-Trainer.

Periodically, these classes participate in tours to locations of educational and cultural significance in the metropolitan area. These field trips are designed to interest and inform the students concerning their local community. Tours through major industrial plants are also included as a type of pre-vocational survey activity.

Completion of this transitional program leads to a ninth grade program of courses in English, community civics, mathematics, general science, art, and occupational information plus a number of vocational shop experiences. Successful completion (i.e., credit obtained by regular attendance and participation) permits the student to move from the junior high level to the senior high level where, over a period of three years, he may be involved in one or more of the programs at the tenth to twelfth grade levels.

2. Academic Programs

Separate academic departments exist in the school such as Mathematics, English, Social Science, Typing, and General Sciences servicing all the students at all six grade levels. Regardless of the level of instruction or the subject matter, the material is related to the world of work or to the life situations of the students. The degree of relatedness, however, is not as good as has been observed in Job Corps and other programs. This is because the texts are standard ones developed for a non-disadvantaged population and an unrealistic view of the world of work.

The English instruction is geared toward correcting reading and listening deficiencies, filling out job applications, etc. Mathematics focuses on problems related to the student's experiences in the shops or work-study situations. Science instruction emphasizes knowledge of the human body and of the physical world of the student. Social Science treats the geography and government of the local community as it affects the student.

A "correlating committee" of staff members exists to coordinate these academic areas as closely as possible with the vocational and occupational training activities. Regular exchanges between faculty of the academic and vocational phases are attempted, so each staff group has knowledge of the aims and activities of the other. However, in the last analysis, the emphasis is on vocational training and getting students jobs rather than on academics.

3. In-School Vocational and Occupational Programs

Six shops have been established for training purposes including small engine mechanics (repair and maintenance of small gasoline-powered engines), horticulture work-study (on-the-job training in the maintenance of lawns and shrubbery of nearby public school grounds, with compensation up to $60 per month for 50-60 enrollees), building maintenance (repair and maintenance of various plumbing, electrical and carpeting facilities on a helper level), office productions (operation of various business machines), engine lathe operations (operation of drill presses, use of jigs, simple metal processing), and the occupational work experience laboratory (production of simple wood and metal articles, such as bookcases, puzzles, etc., for the elementary schools of the city). The instructional techniques rely more on practical than on theoretical elements, and more on tradition explanation, demonstration, and performance elements than on work station and flexible programming elements.

Also, three sheltered workshops are operated for the seriously mentally or physically disadvantaged student. These include small appliance repair (repair and maintenance of small electrical appliances). production woodwork (fabrication of simple furniture items for school use), and shoe repair (repairing of all types of shoes). In these shops, students share in the profits of the operations based on flat charges above the cost of the materials used. Students are assigned to these shops, based on their expressed interests, aptitudes revealed by testing, and after-job counseling by staff members.

4. Occupational Work Experience Program

This is a three-year program, with the student admitted in the tenth grade. At that level, four periods per day are utilized for basic academic courses structured in terms of the student's abilities and needs. Two periods are spent in the occupational work laboratory, providing in-school experiences in a work situation, e.g., working with others, learning respect for authority, following instructions, and being introduced to production methods, procedures, and costs.

In grades 11 and 12, one half-day is spent in school in basic academic subjects. The other half-day, the student is employed in a job in the local commercial or industrial community with a wage stipend. Each boy must save a percentage of his wages each payday. Wages range from $1.40 to $2.60 per hour. This on-the-job training in real-life work situations helps to orient and prepare the student for entry into the labor market when he leaves school.

A total of 75-80 students are employed in the Neighborhood Youth Corps, under the supervision of a full-time coordinator. These students are employed by the federal and local government agencies and by other schools in the area.

Completion of this three year program is recognized with a certificate. In addition, this school has a highly successful award and incentive program.

5. Summer School Program

Utilizing Title I ESEA funds, the school operated a summer school program in 1967 and 1968, with pupil enrollment on a voluntary basis. Designed for the most severely handicapped pupils, this program had an activity program similar to those in the regular year, but with more intensive staff resources, smaller classes, individualized instruction, and some experimental learning situations. Objectives were, through enriched occupational and educational experiences, to improve academic and vocational skills, to stress physical fitness and good health, and to reinforce the learning of the regular year.

Mental, dental, speech, psychological, and other supportive services were available for these summer programs.

6. Bureau of Vocational Rehabilitation

The city school board has entered into a contract with the State Bureau of Vocational Rehabilitation (BVR), the only such contract with a public school in the state, to service seriously handicapped students through a professional staff resident in the school. The school BVR staff consists of a unit supervisor, one counselor, and one clerk.

In addition to office facilities, a Work Evaluation Room has been established, with equipment in wood, metal, electricity, small gasoline engines, and a mechanical aptitude testing station. After spending from one to six weeks in this room under the supervision of an evaluator, the pupil is assigned to one of the school's shops in which he shows interest or ability. At the end of the first semester of 1967-68, there were 35 active BVR cases being handled by this residential unit.

E. Administration

As noted, the school is part of the city's public school system. The school principal reports to the city school superintendent through a director of secondary schools and with functional supervision provided by a director of technical vocational education.

Most of the funding of this special needs program is from local tax revenues, but additional funds under the Vocational Act of 1963, and the Elementary and Secondary Education Act of 1965 have been brought to the support of the program. Detailed information on the amounts and sources of program funds was not available.

Program officials estimated the annual cost per student as about $435, or somewhat higher.

F. Impact of the Program

The school appears to have no structured plan or program for involving parents. Use is being made of persons who are indigenous to the neighborhood and groups being served to perform home visits to check on attendance. No advisory committee of parents has been established, and no regularized parent-staff conferences were reported.

Statistics have been maintained on the program relative to dropouts and to class attendance from 1948 to date. The attendance record has been quite high: 95% in 1960-61 and never lower than 89% (in 1966-67). The withdrawl record, however, has been less impressive varying from 23% in 1966-67 up to 38% in 1950-51. For the past seven years, the annual dropout rate has stabilized in the range of 23%-25%. Additional staff funded by ESEA funds have been available for home visits within the past two and a half years, but the withdrawal rate has remained fairly constant.

There is a lack of achievement data because achievement tests are not systematically administered in the upper grades. However, there were data available on individually administered intelligence tests (Weschler) for 58 students. The results indicate that 35% to 40% have I.Q.'s below 75. Of the 58 students, only two have I.Q.'s above 90.

The only data available at this writing, concerning the initial placement of program graduates, are fragmentary and they relate only to those students completing the Occupational Work Experience Program at the end of the first semester of 1967-68. Of the 39 graduates of this program in late January, 1967, two entered military service, and 18 were employed almost immediately. The program officials estimated that, within a few months, 90% or more would be employed. All of these graduates were tested and interviewed by the state employment service, which aided in placement. The weakness of the program is that few of the trainees are placed in training-related jobs.

No placement surveys have been made to determine how many students leaving the program for any reason go into employment related to their training. Thus, evaluation of the curriculum and its effect is impossible and improvement of the program (assigned to the special curriculum committee) has to proceed by deduction and experimentation.

Evidence indicates a near absence of behavior problems in this program.

G. Qualitative Impressions

The school has an open admissions policy, admitting those eligible for the program without hesitancy or challenge. But there has been a steady decline year-by-year in the total enrollment of the program from about 1,440 in 1954-55, to somewhat over 1,000 in 1966-67--a decline of almost 30%.

As it is directed toward the target group, this program is impressive in its design and operation. Attendance and behavioral change records are exemplary. But beyond this information, there are virtually no data to measure the relevance or effect of the program. Moreover, the recorded annual withdrawal rate of nearly one of every four enrollees over a period of years indicates that the holding power of the program is rather weak.

With regard to measuring the impact of the program on achievement, there was an absence of a concern over increments in basic education in contrast with the over-riding concern with getting the student a job. Thus, there is little achievement testing.

Finally, in the critical matters of placing program graduates in employment related to their training and of following up with supportive services to aid adjustment of the student to the new employment situation, the program is weak.

The vocational phase is strong, if not exemplary. Effective use has been made of Title I ESEA funds to obtain new training equipment; a pre-vocational program exists but with limited perspectives concerning the scope of occupations available; and the classes are close to the recommended maximum. However, there has been too little consultation with the labor market concerning skill offerings and equipment; no advisory committees for this purpose were identified. And cooperative work experiences are available to but a small proportion of the students. The school officials reported that these experiences aided in holding the students in the programs, but the total number in such activity programs is less than 10% of the total annual enrollment (not counting the NYC enrolless).

The supportive staff of the program is one of its strongest features. The resident BVR staff brings resources to the school for the seriously mentally and physically disadvantaged students, not often found in such a program. The Work Evaluation Unit concept is especially exemplary. Too, the use of non-professionals indigenous to the community and target families as advisory and home visitors is commendable. And the medical, health, counseling, speech therapy, and psychological services appear adequate. However, the testing program could be strengthened. More extensive initial placement efforts accompanied by supportive services for the students in their first employment are needed. Also, there is little effective outreach into the home of the enrollees, either to involve the parents in the program or to ascertain and correct problems inhibiting the success of the enrollee.

From an administrative viewpoint, this program has both positive and negative elements. Although the faculty is substantially integrated racially, those in supervisory and professional support roles are predominately white. Principal-teacher relations appeared, to one program observer, as more formal and authoritarian than cordial and participatory. Most of the teachers exhibit an ability to identify with the disadvantaged boys. The absence of a productive in-service training program is especially unfortunate, since most of the faculty has little formal training in working with disadvantaged youth. The failure to have a systematic placement record system means that there is no system of feedback of information based on a graduate's performance on the job to evaluate and improve the program. Finally, the physical plant is woefully outmoded and inadequate; the only major physical improvement that has been made at the school since 1926 was a new wing opened in 1948 with an auditorium, a health service center, and a board room. A new building is contemplated for the near future.

A possible explanation for the absence of behavior problems was the use of intensive counseling during the eighth, ninth, and tenth grades. Early in the fall 1967 semester, a special survey was made to determine where the behavior problems were occurring. A total number of 75 cases were identified. The grade distribution was as follows:

Grade:	7	8	9	10	11	12
	4	12	23	21	10	5

The number of times pupils were referred was as follows:

No. Times Referred	No. of Pupils
1	59
2	10
3	3
4	3

It will be seen that pupils in the eighth, ninth, and tenth grades were in need of intensive counseling. This counseling has provided an indication that it was successful in reducing behavior problems. Too little information is known or sought on the educational increments earned by enrollees and the factors which result in positive behavioral changes.

H. Comments

It is recommended that, if and when a new building is erected for the program, the new facility be in an integrated neighborhood and that the program itself be integrated and co-educational. The stigma of "a bad boy's school" and the slum area where the school is situated discourage pupil enrollment and pride in the program by enrollees and parents alike.

Better articulation should be attempted by program officials between academic and vocational phases, between the program and the local labor market, and between the program and post-training programs.

Steps should be taken to establish more contact with the parents of the enrollees to gain their understanding and support of the school's training efforts. Ideally, the parents should participate in the decisions and policies of the school affecting their children.

More systematic information systems should be established relative to the relevance and effect of the curriculum, to the adequacy and product of the personal and job counseling activities, and to the initial placement and experience in the work world of program graduates.

Finally, more attention should be given to minimizing program withdrawals.

A brief chart summarizing the data obtained and specific characteristics of Case Number 8 follows.

SUMMARY DATA: CASE NUMBER 8

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Midwest-inner-city
2. Type: Work Study; Special Needs; Vocational Education
3. Kind of School: Full vocational education
4. Age of Program: Over 2 years
5. Enrollment: 128; Males 100% Females 0%
6. Average Age: 15-18 Grades 9-12
7. Race/Ethnic: White 1% Negro 99% Spanish American ___% Other ___%
8. Average Academic Retardation: 2 years
9. Family Income Under $3,000: 85%
10. Primary Occupation of Heads of Household: Not available

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 16 Basic Education 16
2. S/I Ratio: Vocational ______ Basic Education ______
3. Diploma/Certificate: Certificate of Completion
4. Number of Vocational Offerings: 12

III. TEST DATA

	Reading	Arithmetic
Grade	7.4	6.7
N	33	32
Score	4.3	3.7

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 13% Prior to Program 25-30% Regular School ___%
2. Follow-Up Data:

V. COST DATA

1. Annual Cost/Student: $435
2. Cost/Student Hour: ______
3. Average Annual Starting Salary for Vocational Teachers: $6,200

CASE NUMBER 11

A. General Description

This special needs program was established four years ago by a county school district with a school population of 16,000, "to provide occupational training for high school youth from ages 14 through 20 who are disadvantaged students." Students are classified as disadvantaged if they are mentally or functionally retarded.

The training is offered in the Area Vocational and Technical Center operated by the school district. This facility was first erected in 1963, expanded in 1965, and further additions are presently underway. This school district has a higher proportion of vocational students among its enrollment than any other district in the state.

The site of the training facility is in a small city within commuting distance of a rapidly growing metropolitan area in a southeastern coastal state. The economic base of the city is the agriculture of the surrounding area, tourism, and service occupations to meet the expanding needs of middle-income retirees; further, a port servicing ocean-going vessels is in the process of development.

The school district, since 1947, had provided some educational opportunities for its special needs students. Records indicate that some 4.7% of the school population regularly needed these special services, which were included as part of the regular elementary, junior high, and high school programs. In 1964, a "Special Disadvantaged Project" was developed to effect "a comprehensive and coordinated program between special education and rehabilitation, with the view of bridging the gap between the education and remunerative employment."

Through a cooperative agreement between the State Division of Vocational Rehabilitation and the school district, this program was instituted to train disadvantaged students of secondary school age in low-skill and semi-skilled occupations and to place them in full-time gainful employment following the program. It was felt by all concerned that such "vocational rehabilitation" services are better utilized during the developmental years, rather than delaying the services until adult failures have been experienced."

B. Student Characteristics

The total program enrollment during the 1967-68 school year was 144 students. In ninth grade, there were 14 students with an average age of 16; eight students with an average age of 17, in grade 10; four students with an average age of 18, in grade 11; and grade 12 had two students with an average age of 20. An additional 116 program enrollees were ungraded; the average age of this group was 17.3 years.

The male/female ratio was 63.5% to 36.5%; 60% of the students were Anglo, 38% were Negro, and 2% were Spanish-speaking; 77% of the students were from homes with less than $3,000 annual income. The largest proportion of the parents of the enrollees were occupied in blue collar, farm, agriculture, or service occupations.

The majority of the pupils in this program have been identified as mildly mentally retarded, who, with proper preparation can be fully capable of independent living in the community and of gainful competitive employment. A lesser number have been identified as moderately impaired, capable of maintaining themselves and performing adequately in unskilled work assignments. A third group has been identified as functionally retarded, because of psychological or emotional problems, because of social, eonomic, cultural or academic impoverishment, or because of some type of physical disability.

C. Faculty and Staff

The staff and faculty of the program are as follows: a director (also a guidance counselor), eight academic instructors (six in ungraded special education and two in remedial reading), nine vocational instructors (in six different occupational areas), and three guidance counselors. The DVR personnel involved in the program are: a supervising counselor, three counselors, one social worker, and one job placement coordinator.

Both the academic and vocational instructors are certified by the state as public school teachers in exceptional education with the vocational teachers further required to have had work experience in the occupational area being taught. The vocational staff was given special screening to insure interest, aptitude, and ability in working with disadvantaged youth.

Salary information for the various instructional and supportive personnel was not available.

No staff in-service training program of any depth and regularity has been developed yet, though regular staff meetings are held to discuss program problems and progress.

Class size in both the special education and the vocation education courses in 1967-68 permitted a teacher-pupil ratio of one to 10.

D. Curriculum and Scheduling

The instructional program provides three class periods of occupational training daily throughout the school year for students who are presently assigned to special education classes in one of the seven secondary schools of the county. These students attend their individual high schools for the homeroom period and, immediately after this, half of them are transported by buses to the Area Vocational and Technical Center. Here, they receive three class periods of occupational instruction, and are then returned to their own high school for lunch and afternoon instruction in the classroom.

Those students who attend the center in the afternoon remain in their high schools during the three morning periods with special education teachers, have their lunch, are transported to the center for occupational training, and are returned in time to catch buses for home. Thus, the academic instruction continues, as before this program, to be given in the feeder schools, and all of the vocational instruction is offered at the center.

Approximately 70% of the program enrollees are assigned to ungraded special education classes at the home school. They do not receive units toward graduation, nor is credit given them for the vocational course. If they remain in school until the legal age for leaving, a certificate of completion is awarded. The 30% of the students who are assigned to graded classes (usually at basic levels) do receive three credits per year for the vocational courses and may proceed to a high school diploma.

The skill training given at the Center consists of six courses, each concerned with a general area of service occupations. These occupational areas are: landscape maintenance and horticulture, domestic skills, care of the invalid and infirmed, service station attendant, gas engine maintenance, and building maintenance and custodial assistant. During the first few weeks of the school year, the students are rotated through the six skill training areas to give them information and ideas concerning each one. Then, with the aid of counseling by both DVR and school counselors, enrollment is made in the occupational area best matched to the individual student's interests, abilities, and desires.

Efforts are made to correlate the two phases of education--academic and vocational--which are physically separated. The instructors in both programs meet regularly to exchange perspectives and insights and to learn the specifics of the various activity programs offered at the two sites. In this way, the student's instruction in arithmetic, reading, or other classroom work is related by the classroom teacher to the vocation for which he is training. DVR guidance personnel and the supervisory personnel of the Center also participate in scheduled interchanges between the two groups of instructors. The joint sessions produce many suggestions to upgrade the effect and relevance of both the special and the vocational education activities. All of the above coordination activities are systematically implemented.

The vocational training is quite flexible, permitting varied experiences within one occupational area and, in some cases, additional skill training in a second, related area; e.g., in the maintenance of lawn mowers for those students in the landscape and horticultural occupational courses. The vocational instructional program is not based on any certain number of hours of training, but rather is aimed at retaining each student in the program until he or she fulfills the three criteria of: (1) the development of the necessary skills, attitudes, and knowledge to be able to be successful in the world of work, (2) the availability of a job, and (3) the reaching of the legal age to enter full-time employment.

It is possible for students in this program to transfer to the regular vocational course offered at the area center. Thus, they are not "locked in" or "locked out." Recently, an additional transitional device between the skill training at the center and full-time employment was added. Selected, well-adjusted students approaching work age are place in half-time jobs, after school hours or in the summer months, under the supervision of a work coordinator. As they adjust to the jub in a satisfactory manner, they are terminated from the program to begin full-time employment.

Close working relations with the Division of Vocational Rehabilitation and the State Division of Vocational Education are maintained to keep the content and methodology current to the newest ideas for the education of seriously disadvantaged youth. In addition, detailed case records are maintained on each individual's progress throughout the system.

E. Administration

As noted earlier, this program is administered jointly by the county school system, its Area Vocational and Technical Center, and the State Division of Vocational Rehabilitation.

Funding is also jointly accomplished by these two agencies with additional Vocational Education Act funds. A breakdown of funding sources and amounts was not available.

The annual cost per student enrolled in this program in 1967-68 was $1,200.

F. Impact of Program

No attempt is made to publicize this program in the local community, to avoid the stigmatizing of either it or its enrollees. And since the program enrollees participate in skill training at the school district's Area Vocational and Technical Center together with non-disadvantaged students--in fact, they ride the same bus--an opportunity is offered for the enhancement of the self-image and self-respect of these disadvantaged youth.

The placement of students from this program is unusually high, almost 100%, and at an average hourly rate of $1.60 per hour. This results from the policy of retaining persons in the program until placed, a quality program, and a substantial demand in this geographic area for semi-skilled and service personnel. Approximately 25 of the 1966-67 graduates progressed so well that they are now being trained in regular skill craft vocational courses.

G. Qualitative Impressions

This program definitely serves the category of disadvantaged, generally classified as mentally retarded and poor. More than 75% of the students had less than a 75 I.Q. at time of entrance in the program and approximately 77% are from families with less than a $3,000 annual income.

The overall dropout rate during the 1967-68 school year is recorded as 16%, which includes departures by members of migrant families and those who left to enter the armed forces. Only about 5% leave the program through dissatisfaction or reasons of personal failure. Acceptance of some students by the armed services can be interpreted as one result or success of the program because most students would not have met armed services' qualifications at the time they entered the program.

An exciting and innovative feature is the planned development of a halfway program between school and full employment through which students will be placed in part-time summer employment. This program provides another indication of the flexibility of the administration in adopting new ideas.

The achievement of this program should not be measured only in terms of job placement. Records disclose that seven students have been returned to regular academic classes. This is understandable in view of the remarkable gain made in average I.Q. during the program. The initial testing was done in 1965, using a professionally-administered WISC battery. The average I.Q. at that time was 73.3. Of the original 132 students tested, 38 were available for re-testing in June 1968. The average I.Q. of this group is 82.3, an approximate gain of 10 points. Individual members of the group showed gains as high as 28 and 26 points. Five members showed gains of 20 points or more. On the Gray's Oral Reading Test administered in 1965, the average reading level was 2.6; the same test in 1968 showed the average reading level was 4.2.

H. Comments

There are many factors which contribute to the effectiveness of this program. The practices which most recommend themselves to other programs are: the careful planning of the program prior to its opening which included not only course content and teaching method, but the critical matter of administrative arrangements; the close and compatible relationship between the academic and vocational programs and staff; the smooth working relationships between the agencies involved; careful selection of teachers; training the teacher to "not take it personally" when a student acts out his behavior problems; frequent staff meetings; and a concept of training for job clusters, rather than individual occupations.

The careful planning that characterized the initial stages will need to be maintained when the school continues to integrate during 1968-69.

The vocational training program and counseling support for girls needs strengthening. The domestic skills area needs broadening and more significant vocational areas could be offered.

A brief chart summarizing the data obtained and specific characteristics of Case Number 11 follows.

SUMMARY DATA: CASE NUMBER 11

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Southern small city-suburban
2. Type: Special Needs; Voc. Education
3. Kind of School: Half Vocational Education
4. Age of Program: Over 2 years
5. Enrollment: 144 ; Males 63.5% Females 36.5%
6. Average Age: 16-20 plus 17.3 Grades 9-12 plus ungraded
7. Race/Ethnic: White 60 % Negro 38 % Spanish American 2 % Other ____ %
8. Average Academic Retardation: 4 years
9. Family Income Under $3,000: 77 %
10. Primary Occupation of Heads of Household: Blue Collar, Farm

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 10 Basic Education not available
2. S/I Ratio: Vocational 10/1 Basic Education 10/1
3. Diploma/Certificate: Regular high school Diploma; Certificate of Completion
4. Number of Vocational Offerings: 6

III. TEST DATA

	PRE-TEST		POST-TEST
	Reading (Gray's Oral)	Arithmetic	Reading (Gray's Oral)
Grade or Date	1965	6.4	1968
N	38	48	38
Score	2.7	5.0	4.3

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 16 % Prior to Program ____ % Regular School ____ %
2. Follow-Up Data: 100% placement of graduates and follow-up counseling of graduates placed in jobs.

V. COST DATA

1. Annual Cost/Student: $1,200
2. Cost/Student Hour: ________
3. Average Annual Starting Salary for Vocational Teachers: $ not available

CASE NUMBER 38

A. General Description

This program is operated exclusively for mentally retarded youth in a large city on the eastern seaboard. It is centered in a special public school for retarded children over 12 years of age, which was opened by the city school district in 1953. Enrollment in the school ranges between 350 to 400. Emphasis in the program is on job training, with job-related academic instruction, work experience, placement, and follow-up services.

The school is a clean, well-equipped, modern facility in the inner-city, operated much like a regular high school, with dances, social functions, clubs, and other organized extra-curricular activities. Instructors work closely with parents, who take an active part in school functions.

B. Student Characteristics

The 1967-68 enrollment consisted of the mentally retarded from throughout the city and those referred by junior high schools when they had become behavior problems. While students' I.Q.'s ranged from 50 to 85, at least a dozen fell below 46.

Males made up 66% of the student body. Only 1% were white. Three-fourths came from homes with incomes below the poverty level of $3,000 per year. All were retarded in academic achievement by three years of more. The school accepts students expelled from other schools, court appointed cases and those with criminal records, but excludes girls who are pregnant at the time of application. Eight girls dropped out during the year because of pregnancy, which school officials said was an unusually high rate. About 10% of the students had delinquency records. Some students had severe emotional problems. Those with physical handicaps included some epileptics, four with visual, and two with hearing defects.

C. Faculty and Staff

The faculty of 43 is under the direction of an experienced teacher and administrator of programs for the mentally retarded. The staff includes a counselor, two job coordinators, a shop coordinator, 18 academic instructors, and 21 vocational instructors.

The principal is a woman who has devoted her life to teaching and counseling mentally retarded youth. She is popular with the students. Her love for the children and rapport with them carries over to the faculty and is reflected in the entire school operation. It follows that the faculty is carefully selected for their attitudes toward the youth and sympathetic understanding of their problems, as much as for academic background, teaching experience, and trade knowledge. The staff has had a range of formal training with the retarded. In addition, the accredited vocational staff member has over five years of practical experience. The key element, however, is their ability to simplify training and establish work habits.

D. Curriculum and Scheduling

The four-year curriculum can be summarized in five points: orientation to the need to work for a living, study and practice of successful employee characteristics (attendance, grooming, behavior, employee responsibilities), anaylsis and study of available entry jobs, work adjustment and evaluation of job ability and interest, and full-time job placement with cooperative follow-up by a job training director until successful adjustment is assured. The techniques of instruction rely on lectures and discussion more than printed materials.

The school day lasts five and one-half hours. Vocational courses are keyed to low level employment opportunities in food service, laundries, dry cleaning, hospitals, clerical, stock maintenance and marking, service stations, custodial service, and power tool operations. Because most students have a maximum reading ability of fourth grade level, a reading laboratory was developed to improve their skills. However, students were not tested during the course of this study.

Both vocational and academic classes average 20 students. Freshmen are enrolled in industrial arts courses in addition to academic subjects. First-year students learn vocabulary as well as how to fill out job application forms, how to budget their incomes, and other tasks involving mathematics. Each is required to open a bank account, no matter how small, which must be sustained throughout the school years. Field trips are incorporated in a program to orient students to the world of work. At the junior level, students start actual work experience in six occupational areas for six weeks each. They are supervised by an instructor, but are not paid. They use vocabulary lists containing words related to the world of work, e.g., tool lists, etc. Actual employment application and payroll forms are used as instructional aids. For each trade area, the media of instruction consists of actual equipment the student will encounter on the job, e.g., the latest dry cleaning equipment. Printed materials are generally restricted to those items encountered on the job, e.g., service station job sheets, and customer receipts.

Senior level students receive instruction in some academic courses, including history and government, and are taught how to budget. Again, the use of texts is limited because of low reading ability. Students are paid for their half-day of work. Teachers deliver them to their jobs and remain with them until the students adjust to the work environment. All working students receive at least the minimum wage.

E. Administration

The school is operated by the city school district with assistance of some federal funds from the Vocational Rehabilitation Administration.

F. Impact of the Program

Of 64 students in the graduating class of 1967, 61 were employed at the time of this study (Summer 1968). The other three were not available for employment, one having been placed in an institution for full-time care, another having married, and the third being an unwed mother. All but one of the 61 employed were working at the occupations for which they had been trained by the school.

Jobs successfully held by graduates of the school include cook's helper, salad and sandwich maker, shipping helper, tray maker, orderly, cashier wrapper, order filler, laundry sorter and presser, messengers, power machine operators, and collators and assemblers. According to school officials, employers found the students to be dependable workers. This is also reflected in the high employment retention rate. Thus, this program has received a great deal of national attention.

G. Qualitative Impressions

Without doubt, this program was established for, actively recruits, and serves severely disadvantaged retarded students. The perplexing problem is why, in a large city with sizable white population, this program has an almost all Negro enrollment. Nevertheless, the enrollment is 100% disadvantaged. The children come from extremely low income families and are severely retarded.

Retention and dropout rates are not available from the school program, but the general impression is that enrollment is constant, and attendance comparatively good considering the severe problems of the students.

The program had most remarkable success in job placement and retention through a large development staff which was able to monitor both employers and the students in the job situation.

The most important factors of success in this program were the dedication and experience of the staff, the careful attention paid to the job placement activities, and the thoroughly modern training equipment and facilities. This is quality education for the retarded.

The employers, some of the largest and most successful in the city, were deeply involved and committed to the program. They made known their manpower needs and problems. The program staff is responsive and makes a special effort to accommodate the employers. For example, the program staff provides potential employers complete, accurate, and detailed information concerning the individual's family, social background, and work background before placement. During the on-the-job training period, unsuccessful employee-students are removed by a school representative, relieving the employer of the responsibility for laying off or discharging a handicapped person.

The staff attempts to make curricula meaningful not only in terms of the jobs for which the students are being trained, but toward the everyday world and problems they face after graduation. The third year of the program, when the students have an opportunity to experience a variety of jobs, contributes to the success of job placement and stability in a way that aptitude tests could not predict with this type of student.

H. Comments

In view of the success of this program, it is difficult to make recommendations that will not discourage a dedicated faculty and staff. This evaluation recognizes that under a more conventional program or curriculum these students would be written off as lost.

However, there is overwhelming evidence that testing--even in the case of these exceptional students--would be of value. Progress and achievement, no matter how slight or elementary, should be documented.

Considering the results obtained, the staff of this project should be able to develop a unique testing system, perhaps one related to work sampling as a further contribution to the education of the retarded-disadvantaged.

A brief chart summarizing the data obtained and specific characteristics of Case Number 38 follows.

SUMMARY DATA: CASE NUMBER 38

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Northeastern large city.
2. Type: Vocational education
3. Kind of School: Mentally retarded
4. Age of Program: 15 years.
5. Enrollment: 350-400; Males 66 % Females 34 %
6. Average Age: over 12 Grades Ungraded
7. Race/Ethnic: White 1 % Negro 99 % Spanish American ____ % Other ____ %
8. Average Academic Retardation: 3 years
9. Family Income Under $3,000: 75 %
10. Primary Occupation of Heads of Household: ____

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 20 Basic Education 20
2. S/I Ratio: Vocational ____ Basic Education ____
3. Diploma/Certificate: ____
4. Number of Vocational Offerings: ____

III. TEST DATA

Not available.

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 ____ % Prior to Program ____ % Regular School ____ %
2. Follow-Up Data:

60% of 64 graduates employed in training related jobs.

V. COST DATA

1. Annual Cost/Student: $ ____
2. Cost/Student Hour: ____
3. Average Annual Starting Salary for Vocational Teachers: $ ____

PROGRAM CATEGORY IV: DELINQUENTS

CASE NUMBER 2

A. General Description

In 1895, a western state established a residential institution for delinquent girls. All admissions to the institution are by court commitment. Currently, the population averages 140 girls between the ages of 10 and 18.

The atmosphere of the school is conducive to rehabilitation. The grounds are spacious and pleasant with trees, grass, and streams. The cottages are almost like a family home. There are about 25 girls per cottage. They eat together at regular hours; each girl has a cheerful, attractive room which she is expected to keep neat and clean; each cottage has a "day room" where the girls can talk, watch T.V. or play the piano. Every attempt is made to make the school as little like an institution as is possible. The girls are locked in their rooms at night, but during the day, the gates are not locked.

Approximately three years ago, the institution established a vocational education program. This is not to say that prior to that time there were no efforts at vocational education. However, three years ago a deliberate attempt was made to emphasize vocational preparation, and three programs were established: cosmetology, food service, and vocational business.

At about the same time, a work study program was implemented which made it possible for selected girls to work two or three days a week outside the school.

When one is considering and evaluating this program, it is important to remember that the primary purpose of this school is rehabilitation of delinquent youth and that vocational education is seen as just one of the programs which will assist the rehabilitative efforts. Other programs include therapy, family counseling, music, dramatics, religion, recreation, community support, and Big Sisters.

B. Student Characteristics

The laws of this State permit commitment to this institution only in the event that the girl has committed an act which would be a felony if committed by an adult. In spite of this requirement, there are occasional commitments of girls for lesser offenses. The reason for this being that while the offense is minor, the characteristics of the girl involved suggest an institutional treatment program.

Entry criteria of the school are designed to prevent the admission of girls with severe mental disturbances and those who are mentally retarded.

The law would permit admission of girls up to the age of 21, but the present age range is from 10 to 18 years, and the average is 15.5. The average intelligence quotient of those currently admitted is approximately 91.

The racial characteristics of the current population are as follows: Anglo, 57.9%; Spanish-Speaking, 28.9%; Negro, 9.4%; and Indian, 3.8%.

The families from which these girls come exhibit a high degree of social and personal disorganization which is to be characteristic of a delinquent youth population. The records at the time of admission disclose that 35% of the girls admitted were previously living in a family with both mother and father; approximately 24% were living with a step-parent; 27% were living with one parent. At any given time, between one-fourth and one-third of the girls will be members of a family which receives public assistance.

There can be no question that this school is open to disadvantaged girls, for it accepts pregnant girls, students expelled from other schools, court appointed cases, and students with criminal records.

C. Faculty and Staff

The school complies with all State requirements. As a consequence, the girls receive a regular high school diploma and the staff meets all state accreditation requirements.

The faculty presently consists of 12 teachers, a counselor, and a principal. This basic staff is supplemented by a supervisor of special services, a psychologist, a social worker, and a part-time psychiatrist (two hours per week).

In a recruitment and selection of teachers for the program, the school complies with regular state requirements (a teaching certificate), no special criteria are set or recognized. Faculty starting salaries average $600 per month.

Although this is the official information, a closer examination of the teaching staff indicates that most members have several hours credit in special education, with several earning the credits on their own time and of their own volition. In addition, one of the 12 staff members holds a Masters Degree in special education and another has a "Life Certificate" in special education. Another teacher is working on his Masters in special education through a grant arrangement.

While the need for additional study is recognized, the teachers do not seem to feel that the lack of formal requirements for background, education and skills beyond the state certification is a drawback to effective performance and teaching. More important is the ability to relate to the students. This applies only to the staff which is directly associated with the vocational education program. The total staff for the institution numbers 79 full-time; 12 part-time, and six contractual. This number includes 42 cottage counselors and their supervisor. It should be noted that the residential environment and the counseling staff provide additional support for the vocational training. This support is more motivational than skill related.

D. Curriculum and Scheduling

The admission procedures of the school provide for a careful examination of the girls including health examination, psychological, educational achievement, and other testing. Normally, this information is integrated with other information secured from public school records, court records, and family histories. The work-up is completed during the first six weeks of residence, and at that time, the girl is placed in the program and is assigned activities which are tailored to her needs, interests, and capabilities. Of the 104 girls currently in residence, 40 to 45 of them are enrolled in the vocational education program.

Students in the vocational, business, and food service programs spend one-half day in that program and one-half day in academic classes. In contrast, girls enrolled in cosmetology are not required to take academic courses. Girls are only eligible for the cosmetology program who have attained an age of 16 years (above compulsory school age) and an eighth grade level education.

The vocational business program offers the conventional courses in general office work including typing, filing, and bookkeeping.

The food service program really evolved from home economics. It includes instruction in food preparation, with actual practice in preparing food for the cottage where the girl resides, and added training opportunities appropriate for restaurant employment as a waitress or cashier.

The cosmetology program conforms to the state requirements, is licensed by the state, and can lead to certification as a cosmetologist under state law. The law requires a total of 1,650 hours for the State Board Examination and the girls are provided with a certified 1,000 hours of instruction at the school.

Textbooks have been "outlawed" in the school. All teaching is done by individualized units. Reading and teaching machines are used extensively using commercially available and multi-media materials such as newspapers, magazines, etc.

E. Administration

The school is administered by the Division of Youth Services of the State Department of Institutions. The Division is principally responsible for hiring and establishing the curriculum. The day-to-day school policies and activities are handled by the director of the school. Most of the funding comes through appropriations from the state legislature. The school does get some Federal funding for its vocational program under the Vocational Education Act. As an institution which provides room and board, per-student costs are very high--currently about $5,000 per capita. No breakdown of vocational education costs alone is available.

F. Impact of Program

It is virtually impossible to measure the impact of the vocational education program as such, because the number of students in each course is small and quantitative data is lacking. Some measure of the total program is evident from the fact that this institution claims the lowest recidivism rate in the country--about 6%. What influence the vocational education program has on this record is difficult to say. Inasmuch as this is a correctional institution, the records and reports have been designed for purposes associated with a correctional objective; for example, placement records are kept in terms of the location or environment in which a girl is paroled or placed rather than in terms of placement for employment. Consequently, data is not available which would give an indication of the effectiveness of the training. At the time of this study, we were able to determine that of the 60 girls who had completed the cosmetology course, six had gone on to pass State Board Examinations and 12 others were enrolled in beauty colleges. The employment status of girls after parole or discharge from the food service and vocational business programs is not currently available.

Another important variable in this program is the provision for allowing selected girls to work two or three days outside the institution. This surely affects their rehabilitation. In terms of the overall objective of rehabilitation, it appears that the total program is effective. In spite of serious budget difficulties and resulting understaffing, the girls seem to form strong attachments to the school and its personnel. This is no doubt due to the extra effort of staff members to give individual and personal attention to the girls.

G. Qualitative Impressions

As mentioned, this school is serving a truly disadvantaged population. However, the number of vocational offerings is limited. It is evident that the careful evaluation given at time of admission is successful in placing the girls in appropriate programs. This is no small achievement in the limited programs offered at the school. The institution should continue the development of vocational programs in a variety of human service occupations which would include health and social service. The "dropout" or runaway rate in this case appears to be low. This suggests that a good program is being offered for delinquent girls.

As part of this study, data were requested indicating the achievement level in reading and mathematics. Pre and post-test scores were provided on a limited number of girls. In fact, the number was so limited and the sample so small that it would be unwise to generalize about the population. Within those limitations, the scores disclose no appreciable differences in reading achievement.

Similarly, the available data including pre-test and post-test scores in mathematics are too limited to permit proper interpretation. The data, while probably not significant, suggest a slight loss of achievement in mathematics between the two periods of testing.

The school is placed in an ambiguous position regarding vocational education. The normal stay in the school is approximately 11 months. Reference to the range of ages to be accommodated at the school reveals that for most girls, this school experience is an interlude sandwiched between regular public school experience. On the other hand, for some of the older girls in the group, this will be their terminal school experience.

There were no data available, on either a formal or informal basis, upon which to evaluate this school in terms of the re-entry of the young girls into a regular public school program or placement in training-related jobs. It is possible to infer from the low recidivism rate that these placements are achieved with minimum difficulty. This would suggest that students are receiving educational opportunities which reasonably approximate the opportunities of normal vocational school life (which, of course, is still not saying very much).

One gets the distinct impression that those responsible for the administration of this school are making a determined effort to build an education emphasis in the total program. This is not easy to accomplish in an institution which has previously been based upon a different philosophy and has different objectives. Thus, the factor of staff involvement is clearly the single most important element in the program.

Another factor present in this program is the desire, as evidenced in current efforts, to upgrade the vocational and academic offerings. However, the effect of outlawing of textbooks and substitution of newer technique on achievement is unknown. In other words, the program is growing rather than stagnating. In addition, the school appears to be willing to allow selected girls to work in the neighboring community, thus giving the girls valuable work experience and a vote of confidence.

In summary, this program, while not truly exemplary, appears to be better than average.

H. Comments

The program has made a good beginning. As this program is developed, we recommend attention to the following areas:

1. Modification of information systems to provide more adequate records to measure vocational achievement and follow-up in terms of employment.
2. Investigation of a broad range of occupational opportunities and expansion of curriculum to afford more alternatives including careful investigation of job opportunities in the human service field.
3. A deliberate attempt to extend parole supervision for the older girls to include employment counseling and follow-up.
4. A deliberate attempt during parole supervision of younger girls to follow up and facilitate their return to regular school enrollment.

5. An even greater emphasis on study and work-study outside the institution.

6. An evaluation of educational achievement.

A brief chart summarizing the data obtained and specific characteristics of Case Number 2 follows.

SUMMARY DATA: CASE NUMBER 2

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: West; (serves entire state)
2. Type: Vocational Education
3. Kind of School: Comprehensive; Girls' Reformatory
4. Age of Program: over 2 years
5. Enrollment: 32 ; Males ___ % Females 100 %
6. Average Age: 15.5 Grades 10-12
7. Race/Ethnic: White 58 % Negro 9 % Spanish American 29 % Other (Indian) 4 %
8. Average Academic Retardation: 4 years
9. Family Income Under $3,000: ___ %
10. Primary Occupation of Heads of Household: Blue Collar; Service

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 12 Basic Education 12
2. S/I Ratio: Vocational ___ Basic Education ___
3. Diploma/Certificate: Regular High School Diploma
4. Number of Vocational Offerings: 3

III. TEST DATA

	Wide Range Achievement Tests		
	Pre-Test		Post-Test
	Reading	Arithmetic	Reading
Grade	9.8	9.8	10.8
N	4	4	4
Score	7.9	8.3	7.5

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 1 % Prior to Program ___ % Regular School ___ %
2. Follow-Up Data:

Recidivism is 6%

V. COST DATA

1. Annual Cost/Student: $5,000
2. Cost/Student Hour: ___
3. Average Annual Starting Salary for Vocational Teachers: $7,200

CASE NUMBER 5

A. General Description

This "Youth Development Day Treatment Center" was started in 1966 in a large mid-Atlantic city as an attempt to develop constructive programs to substitute for the institutionalization of delinquent male youth. In that year, $475,000 was appropriated by the State Legislature to support such an effort.

This institution was developed by the State Department of Public Welfare, through its Bureau of Youth Development Services, as a new resource to be used by the juvenile court to rehabilitate and treat selected boys between the ages of 16 and 18 years "who are adjudged delinquent and placed on probation." The Center's program is geared to:

1. enriching the court's usual probation services to boys whose rehabilitation may be enhanced through basic remedial education, vocational training, and intensive individual and group counseling while living at home, and

2. reducing the commitment rate of boys who can better function, achieve, and adjust to society outside a structured full-commitment training school setting.

Boys are assigned to the Center in groups of 50 in an ungraded program of training for six months. Upon completion of the training, the enrollees report to a local Youth Opportunity Center for placement in jobs or programs for further training, or they return to the last school they attended to continue their education.

The program is situated in a former correctional institution for juveniles. The physical plant is quite large and more than adequate for the center's activities. Included is a substantial amount of outdoor area for individual or group recreation.

B. Student Characteristics

In 1967-68, the school enrolled 120 male students with an average age of 17. The nature of the criminal or delinquent act is not a determinate for enrollment in the school. Commonly, the court refers those youth who have a home background that will lend support if they remain in the community, and who give reasonable promise of successfully completing the training program. Most of the youth who enter the program are school dropouts and have built up a distinct dislike for school. They have truancy and poor school behavior records. The majority of them have, at one time or another, been committed to a correctional institution and/or a remedial disciplinary school. Boys in need of psychiatric help and/or those too unstable to adapt themselves to one of the center's occupational training programs are not eligible for admission.

About 90% of the current students are from families with annual incomes below $3,000; 80% of the boys are Negro and the remainder are white.

C. Faculty and Staff

The educational program of the Center is conducted by staff members who are employed by the city school district: five academic teachers, six shop teachers, two counselors, and one testing teacher. All the teachers are male with the exception of the testing teacher. The academic teachers were "hand-picked" because of their interest in the problems of juvenile delinquents and are required to have a psychology major. The testing teacher is an education major who doubles as a music and art teacher and librarian, when such services are needed.

The shop teachers, also specially recruited, must meet the state requirements for vocational certification; i.e., be a high school graduate, have at least 60 college credits, and eight years experience in a vocational field. The program counselors are also state-certificated.

Class size in both the academic and vocational activity programs is uniformly low; i.e., 15 pupils in academic classes, and 10 pupils in the vocational classes.

The starting salary for academic teachers is $6,100 and $8,800 for vocational teachers.

Staff meetings are held regularly to discuss problem students, but there is no systematic or sustained in-service training program.

In addition to the regular school program, a unique counseling arrangement has been employed by the center. Counseling services are provided by the Bureau of Employment Security (BES), the school district and the Department of Public Welfare.

The vocational assessment of youth entering the center was made by the Human Resources Development staff of BES. Social and psychological counseling on an individual and group basis is provided by the public welfare staff. This part of the program includes after school sessions in which the youth have an opportunity to examine and discuss their individual problems. In addition, the welfare counseling staff is available to work in major behavioral problems. Through individual and group counseling sessions, the school counseling staff works on attitudes and other problems related to performance and achievement in the classroom.

In the specialized fields, a number of instructors were recruited from industry. The welding instructor, for example, has 25 years of experience in the industry and, according to school reports, "has acted as a welding consultant for such well-known firms as Budd Manufacturing and Standard Pressed Steel." The food preparation teacher has had 30 years of experience in private business and sold a successful catering service to enter the program.

D. Curriculum and Scheduling

The training period for each student in the program is 26 weeks, consisting of five weeks of general orientation, and 21 weeks of specialized skill training. Boys are in attendance at the center from 8:30 a.m. to 7:00 p.m. daily, Monday through Friday. They are bussed to and from their homes each day and are given noon and evening meals at the Center.

Upon assignment to the Center, each boy is given a General Aptitude Test Battery by Youth Opportunity Center (State Employment Service) counselors. The results of this testing, plus the shared judgment of program teachers, counselors, and the YOC counselors, are utilized to counsel the student into a vocational training area at the Center. Before this selection is made, the boy spends a one-week tryout period, with three hours daily in each of the Center's five vocational training shops: Arc Welding, Woodworking, Repair of Small Electrical Appliances, Food Preparation and Service, and Clerical Practice and Public Contact.

These first five weeks of the program are designed to orient the student to each of the five occupational areas and to familiarize him with the requirements and potentials of each skill area. With these insights, he then, together with his counselor, selects one of the areas for 21 weeks of specialized skill learning. The shop equipment is new and of high quality.

There is a heavy emphasis throughout the program on basic and remedial education, particularly in reading and mathematics. Materials of interest to young men on various levels, such as reading machines and programmed instruction are characteristic of this academic phase of the program. Moreover, team teaching is employed effectively during the final 21 week period, with an academic teacher in each shop to aid with any basic education problem arising from the skill training of a boy.

A typical daily schedule for a student would be:

9:00-noon: Academics (or shops)
12:00 noon-12:30 p.m.: lunch
12:30-3:00 p.m.: shops (or academics)
3:00-7:00 p.m.: dinner, recreation, counseling, etc.

New teaching techniques and devices were observed, particularly in the basic education classes: e.g., learning-games ("tic-tac-toe," "hangman's noose," etc.), tape recorders, reading machines, and team competition. "Guided Group Inter-action Sessions" are held in which the students listen to each other's problems and react. Effective use is made of movies and other audio-visual aids and of field trips to industrial plants or points of interest in the city.

The counseling program appears comprehensive and effective. The use of aptitude testing and counseling to aid in the student's selection of skill training at the center has been described. Further educational counseling is available constantly to aid a boy over a learning block, to help him improve attitudes toward the training, and to explore the demands and possibilities of the world of work. The Center's counseling staff is augmented by professional counselors from the Bureau of Youth Development Services of the State Department of Public Welfare. From 3:00 to 7:00 p.m., these counselors provide individual and group counseling, informal group therapy, tutorial help, and involve the boys in planned recreation and physical fitness programs. Parents are often brought into the center during these hours, individually or in groups, for family counseling related to the progress or lack of progress of an enrollee.

There is a wholesome climate of mutual respect, kindness, and understanding among the Center's staff toward the special problems and needs of their students. Free and relaxed behavior patterns on the part of the boys are encouraged and permitted, but disruptive behavior is not.

E. Administration

Although the teachers involved in this program are employees of the city school district, the center is operated by the Bureau of Youth Development Services, a state agency. A school principal directs the center activities.

The program has been developed and supported jointly by the State Department of Public Welfare, the State Department of Public Instruction, the State Department of Labor and Industry, the U. S. Department of Health, Education, and Welfare, and the local school district. This appears to be an example of the successful mobilization of multiple resources and a beginning of coordination targeted at a special needs group. Funding for the program is also multiple, including: local tax revenues, Title I ESEA monies, and MDTA grants. A breakdown of the amount and sources of the Center's budget and per capita costs is not available. The program is planned to accommodate 400 delinquent boys.

F. Impact of the Program

More than 77% of the boys have been placed in gainful employment after completing the program. Some boys have joined the Armed Forces, and less than 1% have been in further trouble with the law. The Bureau of Employment Security is presently conducting an extensive follow-up study.

The program ends with a graduation ceremony at which time the parents visit the Center. The assistant principal states that every boy improves in outlook and attitude.

About 10% of the students return to regular high school programs. Others probably could make it, but do not try. Compulsory school attendance extends to age 17 in this state, but many of these boys are above that age when first admitted to the center. This may account for some boys not returning to the high school.

G. Qualitative Impressions

The objective of this program is to enrich probation services and provide an alternative to institutionalization for disadvantaged youth with court records who are poor and who are minority group members. It appears to be achieving success in a number of areas.

Since attendance in the program was a condition of probation, there are no records of dropout or retention rates. However, in the context of court services, the program is remarkably effective. Records show that less than 2% of the parolees enrolled had subsequent problems with the law. A predictable recidivism rate for this group would be closer to 40%.

Truancy in the program is chronic. The budget provides allowances of $2.00 per day, but seldom do the youth earn allowances for a full week, records show.

It is reported that 83.5% of the boys are placed in employment. However, this is a figure extrapolated after certain statistical adjustments. The actual records verify 61 placements, which for an enrollment of 132 is less than 50%. Of these 61 boys, 24 are placed in training-related jobs. Students have been placed in jobs paying as high as $2.85 per hour, but no average rate is available. There has been no systematic plan for intensive follow-up. This group of boys is highly mobile and it is difficult to secure follow-up information.

There is also no systematic testing program to measure academic achievement. The information supplied by the school is sparse and indicates no significant change in either reading or arithmetic performance. As could be anticipated in a program of this kind, the thrust is toward rehabilitation; therefore, the nature of the information collected is molded by that thrust: academic and vocational experience is seen as one element in rehabilitation.

The program has successfully integrated the academic and vocational components. There is substantial use of new educational technology and of multi-media approaches to learning. The staff is enthusiastic and cooperative in applying new ideas and suggestions.

The program places heavy emphasis on supporting services. No less than four hours each day are spent in some form of supportive activity, from recreation to group therapy in an effort to produce substantial changes in behavior. The effect this may have on learning is not known.

In general, the factors contributing to the effectiveness of this program appear to be: The integration of academic, vocational and supporting activities, the multiple supporting service, and the flexibility of the staff.

H. Comments

If this program is to be developed in the context of vocational education, it is suggested that sub-objectives framed in that context be developed by the faculty and staff to carry out specific goals. Once this is done, proper testing and evaluation devices will be needed to measure the progress toward those goals. There may be some resistance to such an approach for fear of detracting from the rehabilitation functions. However, if vocational education is to be used as a strategy to effect rehabilitation, the two functions should be compatible.

Administratively, the testing, screening, placement and follow-up responsibilities rest with the State Employment Service. Consideration should be given to the creation of administrative structure which will link these activities more closely with the school administration.

A brief chart summarizing the data obtained and specific characteristics of Case Number 5 follows.

SUMMARY DATA: CASE NUMBER 5

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Northern large inner-city
2. Type: Day treatment Center
3. Kind of School: Vocational; half term
4. Age of Program: 1-2 years
5. Enrollment: 120 ; Males 100 % Females 0 %
6. Average Age: 17 Grades Ungraded
7. Race/Ethnic: White 20 % Negro 80 % Spanish American ____% Other ____%
8. Average Academic Retardation: ______ years
9. Family Income Under $3,000: 90 %
10. Primary Occupation of Heads of Household: ____________

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 10 Basic Education 15
2. S/I Ratio: Vocational ____________ Basic Education ____________
3. Diploma/Certificate: Certificate of Completion
4. Number of Vocational Offerings: 5

III. TEST DATA

Not available

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 ____% Prior to Program ____% Regular School ____%
2. Follow-Up Data:

50-83% placed in gainful employment; 1% have been in further trouble with the law.

V. COST DATA

1. Annual Cost/Student: $______
2. Cost/Student Hour: ________
3. Average Annual Starting Salary for Vocational Teachers: $ 8,800

PROGRAM CATEGORY V: NON-ENGLISH SPEAKING MINORITIES

CASE NUMBER 32

A. General Description

Case Number 32 is a pre-vocational school operated by the Bureau of Indian Affairs on the Navajo Indian Reservation in the Southwest as part of the educational offering of a **three-year-old boarding school for Navajo students.** Its purpose is the recruitment of youth previously by-passed by education, in order to provide them with a basic knowledge of English, reading, writing, and arithmetic by means of elementary vocational training.

The Navajo Reservation is an immense, largely arid, tract of 16,000,000 acres; less than 70,000 acres of this land are used for farming.

The Navajo Indians are a nomadic people, about 85,000 in number with their own distinctive culture, language, and religion. Their principal occupations are sheep-raising and a certain amount of farming, rug-weaving, and jewelry-making from silver and turquoise. Their standard of living is largely at the subsistence level with most annual incomes ranging roughly from $500 to $1,000. The families of 87% of the school's children are on welfare.

The boarding school has a total of 375 students, of which 36 are enrolled in the pre-vocational program. They range in age from 12 to 21. When the students come to the school, none of them speak English. It is, therefore, necessary to have Navajo-speaking teachers and teacher aides. Students are recruited through students speaking favorably about the program and through teachers' visits to the hogans to convince parents that the program will benefit their children. Parents have resisted sending their children for two main reasons:

1. They need the children to help with sheep-raising.

2. They are suspicious and fearful of any Anglo-sponsored program, especially where it might alienate their children.

Once at the school, neither boys nor girls find it difficult to adjust because of the use of the Navajo language and the respect by the school authorities for local customs and beliefs. An example is when ball lightning struck one of the buildings, the parents, students, and Navajo members of the staff thought that the school had been invaded by evil spirits. Consequently, the parents wanted to withdraw their children. To forestall this, the school authorities allowed a medicine man to be called in to take away the spirits. In addition, the school's principal allows tribal officers and medicine men to participate in all major ceremonies.

There is a strong community voice in the program. The Navajo Indians are beginning to exercise political pressure as illustrated by their influence over the program. Toward this end, meetings are held once a month by the Navajo council with the school authorities.

B. Student Characteristics

All the 56 students (35 boys and 21 girls), participating in the program are of Navajo Indian stock. At the time of enrollment, they do not speak English and are completely illiterate. "Anglo" culture is completely foreign to them. Ten of the 56 may be considered mentally retarded. The others are of average intelligence. Of 34 students tested with an average age of 16.8, reading performance was 1.4 and arithmetic 2.3. No intelligence tests are given at the school. Those who complete training and want to continue their education are sent to another school about 60 miles away. Here they have their I.Q. determined and are classified for vocational or secondary education and for college potential.

C. Faculty and Staff

The school has a total staff of 31, consisting of the principal, 18 teachers, two aides, and eight in-service personnel. The principal, teachers, and several in-service personnel are Anglo; two aides and the remaining in-service personnel are Indian. Of the above, five teachers are assigned to the program, three for academic subjects and two for vocational instruction. All five instructors speak some Navajo. The instructional staff spends much of its non-instruction time out on the reservation either recruiting or exploring. The teachers meet once a week for discussion which includes program evaluation and suggestions for curriculum improvement. The staff is currently designing an evaluation scheme to measure program impact.

The teachers are screened and employed by the Bureau of Indian Affairs in accordance with U. S. Civil Service Commission rules and regulations. They are middle aged and have a variety of public school teaching backgrounds, (generally, bachelor's degrees with some advanced training). Most of them are from the south and southwest. They are alert to recent developments in education--especially for the non-English-speaking. They have attended TESL (Teaching English as a Second Language) and other staff development institutes. In summary, they are very responsive to the needs of the Navajo students.

D. Curriculum and Scheduling

The curriculum is an ungraded one. It includes both academic and vocational subjects. The former consists of English, taught as a second language, reading, social studies, arithmetic, and physical training. The vocational subjects consist of shop for the boys and home economics for the girls. Once a week the boys have a class in tool maintenance and the girls in preparing a meal family style. Advantage is taken of the use that tools, utensils, and the operations involved in carpentry, mechanics, and cooking have as practical objects in English learning.

The school week is of standard five-day duration, with the school day beginning at 9:00 a.m. and ending at 4:00 p.m. Only 20 minutes are set aside for lunch. There are six 55-minute periods with five-minute intervals between. Four of the five days are allotted to the regular program of instruction, but Wednesdays have periods assigned to library and physical education. Classes consist of approximately 20 persons with the students divided into three sections.

E. Administration

Both school and program are administered and funded by the Bureau of Indian Affairs. However, the all-Navajo council that meets once a month in the chapter house on the school grounds plays an important role in the operation of both the school and the program. The school authorities find it to their advantage to cooperate with the wishes of the council and to take into account Navajo customs and practices.

The current budget allows $1,259 per student for the school year. This sum includes meals and board, but it is more than double the $580 per pupil cost of comparable Navajo day schools.

F. Impact of the Program

Within the limits of size (approximately 60 students), and objectives (pre-vocational study with basic English, reading, writing and arithmetic), the program has been essentially successful. Its success lies in the fact that it gives a basic education to boys and girls of various ages who otherwise would have no basic education at all. The school achieves this through maintaining the good will of the community and its ability to get students to come to the school voluntarily.

During the 1967-68 academic year, the dropout rate for student participating in the program was 14% (9 out of 65), in comparison to 5% for the school proper (21 out of 396). Those who leave usually do so at lambing and shearing time to help their parents. They fail to return because their parents insist they remain at home. Apparently, the age distribution of those who drop out in this way is weighted toward the older group of children.

There is no set length for the duration of instruction under the program; students do not graduate, but leave when they feel ready or qualified by the faculty to go to a secondary-level school.

During the preceding year, 13 students left the school, most of them to seek jobs in urban areas.

G. Qualitative Impressions

We believe that the approach of this program is an admirable one for four reasons:

1. It involves active cooperation and participation in the program.
2. It uses the native language in instruction.
3. It respects Navajo traditions.
4. It brings basic education without resorting to compulsion.

At the same time, we must recognize that there are basic economic problems and lack of opportunities which impose a limiting factor as to what occupational training can be taught. The reservation has little industry and few outlets for talent. The Indian does not consider schooling a prerequisite for sheep-raising, nor for being a silversmith; he does not want to learn new techniques. In his opinion, the practices of yesterday are preferable to those of tomorrow. His ideas are being offset to some degree by members of the younger generation who are beginning to think of how best to exploit the Anglo culture for their own benefit. And it is to them that we must look for mutually acceptable growth and development.

H. Comments

We recommend and suggest:

1. That the Bureau of Indian Affairs (BIA) be instrumental in extending programs of this type to other parts of the reservation and to other Indian reservations.
2. That the BIA encourage the exchange of teaching experiences among the different reservations.
3. That attention be given to solving the dropout problem during the sheep-shearing period.

A brief chart summarizing the data obtained and specific characteristics of Case Number 32 follows.

SUMMARY DATA: CASE NUMBER 32

I. PROGRAM AND STUDENT CHARACTERISTICS

1. Location: Western; Rural
2. Type: Special Needs; Pre-vocational
3. Kind of School: Comprehensive
4. Age of Program: over 2 years
5. Enrollment: 56 ; Males 63 % Females 37 %
6. Average Age: 12-21 Grades Ungraded
7. Race/Ethnic: White 0 % Negro 0 % Spanish American 0 % Other (Navajo) 100 %
8. Average Academic Retardation: 4 years
9. Family Income Under $3,000: 100 %
10. Primary Occupation of Heads of Household: Farm

II. INSTRUCTIONAL DATA

1. Class Size: Vocational 20 Basic Education ____
2. S/I Ratio: Vocational ____ Basic Education ____
3. Diploma/Certificate: ____
4. Number of Vocational Offerings: 2

III. TEST DATA

	Reading	Arithmetic
Grade	8	8
N	34	34
Score	1.4	2.3

IV. DROPOUT/FOLLOW-UP DATA

1. Dropout Rate: 1967-68 ____% Prior to Program ____% Regular School ____%
2. Follow-Up Data:

15% Graduate; 15% of students pursue post-graduate training.

V. COST DATA

1. Annual Cost/Student: $ 1,259 (approximately ½ residential costs)
2. Cost/Student Hour: ____
3. Average Annual Starting Salary for Vocational Teachers: $____

PART III

THEORETICAL FRAMEWORK, METHODS AND TECHNIQUES, RESULTS, DISCUSSION, AND IMPLICATIONS

III. CONCEPTUAL FRAMEWORK

A. Introduction

Described here is the orientation of the study--why the particular focus on the disadvantaged and vocational education, and the purposes of vocational education (in this study) for the disadvantaged.[12/]

B. Alternative Approaches to Vocational Education

The Vocational Education Act of 1963 [13/] was a response to a variety of social, political and economic forces. It provided for broader Federal support, research and demonstration programs, and the creation of an Advisory Council which was required to report to the Commissioner of Education on the status of vocational education. [14/]

Also, within the Office of Education, the Bureau of Research through the Division of Comprehensive and Vocational Education Research has sponsored research and demonstration programs on vocational education and, in addition, has established vocational education "Research Coordinating Units" in 44 states. These agencies are charged with the responsibility of developing and conducting research in their respective states.

In part, because the 1963 Act has not fulfilled all original goals, a new program is now pending in Congress--"The Partnership for Learning and Earning Act of 1968"; it has a number of interesting features especially in increasing the support for experimental programs. [15/]

This proposed legislation adds an important feature to this study in terms of the contribution this research can make to defining effective programs for the disadvantaged.

The critical question is: What should vocational education provide a disadvantaged student? To some extent, this is a function of the type of program; i.e., there are different techniques in teaching office occupations and technical education. But this is relatively unimportant compared to the philosophy underlying the programs, the context in which the programs occur and

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[12/] The objectives for the project, as outlined in the proposal, are contained in Appendix B.

[13/] P. L. 88-210.

[14/] Vocational Education-The Bridge Between Man and His Work; Publication 1, Highlights and Recommendations from the General Report of the Advisory Council on Vocational Education; U. S. Department of Health, Education and Welfare, Office of Education; 1968.

[15/] Op.cit.; Hearings Before the General Subcommittee on Education; Partnership for Learning and Earning Act of 1968; page 13.

the attitudes and expectations of teachers and students.

The concept of job related or skill training is the most accepted goal of vocational education. The changing economic and social scene no longer makes this a completely tenable approach. A variety of recent studies have pointed out the nature of these changes and the interaction with vocational education. 16/ The conclusions of these studies are that vocational education must re-orient from a skill training outlook to a view of educating the student for a lifetime of work. This is particularly true when dealing with the disadvantaged; developing attitudes toward learning and training is more important than the specific job skills that are taught.

Another major study which forms a context for this research is a study by Kaufman and others. While they did not directly attack the problem of the vocational training of the disadvantaged, they were concerned with the fact that vocational education has not assumed full responsibility for the disadvantaged student. 17/

C. The Rationale For This Project

The issues facing vocational education are the following:

1. The changes that have occurred in the industrial, economic and labor force in this country, all of which dictate the need for better and more effective education.
2. At the junior high school level, youth are exposed to only a limited view of the work world--primarily home economics (if female) and industrial arts (if male).
3. Disadvantaged youth are most likely to leave school at the junior high school level; thus, their vocational education must start early.
4. Youth at the junior and even the high school level are in no position--psychologically, emotionally, or in terms of experience or knowledge, to make lasting occupational choices. Thus, the educational system must serve these two goals:
    a. Youth must be kept in school (and educated) as long as is possible.
    b. In terms of selecting an occupation, schools must encourage planned procrastination; that is, making it possible for disadvantaged youth to postpone occupational choice as long as possible.

16/ "An Analysis of Vocational Education in our Secondary Schools," Office of Program Planning and Evaluation, U. S. Office of Education, July 27, 1967 (mimeographed); and Op.cit., Vocational Education-The Bridge Between Man and His Work.

17/ Jacob J. Kaufman, et.al., The Role of the Secondary Schools in the Preparation of Youth for Employment; Institute for Research on Human Resources, The Pennsylvania State University, University Park, Pennsylvania; 1967; page 12-13.

5. Disadvantaged youth come to vocational education with inadequate occupational models. For the slum youth whose knowledge of the work world is limited to occupations in the slum environment, the schools must offer an opportunity to experiment with and be exposed to work models that are meaningful.

6. The disadvantaged are most likely (as contrasted to middle class students) to come to the school setting with little or no interest in abstract subjects of arithmetic, grammar, etc. But all youth have a natural interest in the world of work and technology. And it is along these lines that we think vocational education can be most effective for the disadvantaged.

From a more general point of view, at the junior high level, the student's view of the world of work (as far as schools are concerned), is shaped by industrial arts with the emphasis on wood and/or metal working and, if a female, by home economics.

In high school, the range of choices for the vocational student remains limited in terms of the opportunities available outside the school. For example, most trade and industrial programs are expanded wood and metal shops (that is, the choice is increased to: machine shops, welding, auto mechanics, and possibly electronics). Add a course in carpentry and one or two other construction trades, and a young man's list of possibilities has been exhausted. In office occupations, there is the same narrow range of choice: typing, stenography, bookkeeping and, in a limited number of schools, data processing. Occasionally, there are additions or variations such as drafting and printing.

Is an adolescent prepared to make anything approaching an occupational choice? What youngsters need are opportunities to postpone their decisions to a more mature stage in life.

Any adequate evaluation of vocational education for the disadvantaged must, to some extent, focus on a combination of four approaches to vocational education.

1. General education linked to pre-vocational training: Here the approach is to relate to the natural interests and inclinations of young people in the world of work and to develop a basic educational program that really teaches occupational training and general education at the same time.

2. The training provided young people in vocational education should not train for narrow jobs, but for families of jobs or job clusters and provide the basic skills needed in our society.

3. These programs, attempting to link vocational and general education must start as early as possible, perhaps as early as the junior high school level.

4. In the last decade or so, a variety of new developments have come about in the behavioral sciences that relate to the educational needs and problems of the disadvantaged. These ideas range from teaching

styles to curricula organization, to classroom organization, to the presentation of materials, and to the kinds of materials offered. These developments must be carefully combined in a cost-efficient way to maximize training.

What this means is simply: the adolescent years from 12 to 16 are generally characterized by restlessness, uncertainty, and experimentation. The world is changing. In part, what is needed is a link between learning and doing and, thereby, establish a foundation for intellectual growth and intelligent occupational choice at a later date.

Related to this is the fact that education programs attempt to communicate with the student (and this is especially serious for the disadvantaged), in terms of issues that are relevant to the educator. The approach might be reversed: educators should communicate with students on the level of the students and in the terms of their social and psychological backgrounds.

The typical education program usually starts with the notion of basic education as a block of separate subjects and then when the individual completes this stage successfully (if he is still in school), he is permitted to enroll in the vocational education program (if available) which he wanted in the first instance. There is absolutely no reason why the curriculum must be structured in this block fashion, except that it is traditional. The integration of vocational education and general education to the point where a student is not able to recognize them as distinct disciplines is the key.

Marvin Feldman, Program Officer of the Ford Foundation, in testimony before the Congress made this general point:

> "Educated workingmen with a basic general education have become a necessity to our economy, and in a good number of industrial establishments, training programs have been installed to parallel with apprenticeship. Notwithstanding these improvements, however, vocational education is regarded even today as distinct from education proper. 18/

A similar argument of the need to train the disadvantaged in literacy, numerical and living skills concurrent with the development of vocational skills is made by H. H. Katz, President of the American Institute of Engineering and Technology. 19/

Given this framework what would be the characteristics of an "ideal" program? Appendix H presents a cross reference from factors to case studies which-can be used as examples of application. It should have these principles:

18/ Partnership for Learning and Earning Act of 1968; U. S. Government Printing Office, 1968; Washington, D. C.; page 430.

19/ Cooperative Occupational Training, Can It Serve The Disadvantaged? U. S. Department of Health, Education, and Welfare; Office of Education; pages 7-8.

1. Exposure to a variety of jobs.
2. The jobs should be jobs of the future.
3. There should be an inextricable link between vocational education and general education.
4. The programs should be in terms of the needs and interests of the students, not the educators.
5. The programs should permit students to branch out to other occupations, go to college, or go to college and leave in a year or so with a vocational orientation.
6. They should control dropout rates.
7. They should result in increments in achievements.
8. They should result in successful placement in training-related jobs.

An example: supposing a school system offered a program of "aeronautics" or "aerospace" to disadvantaged youth at about the tenth grade level. The program would be operated adjacent to or in cooperation with the industry. The students would have an opportunity to experiment with a variety of occupations in this industry ranging from clerical jobs to reservation agents, mechanics, pilots, etc. The curriculum would link job training and basic education together in such a way that one area would be immediately relevant to the other.

It should be noted that in the above example, we have decided to focus on the presentation of the overall program and not on such discrete things as size of rooms, age of the building and other factors that were shown to affect achievement in the so-called "Coleman Report."[20/] This does not imply that these items are unimportant.

D. Costs and Benefits of the Programs [21/]

Cost-benefit analysis is a technique used to measure the optimum allocation of resources among alternative investments. Its use in educational

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[20/] This report on education of the disadvantaged noted that average white student achievement is less affected by the strength or weaknesses of the school, the facilities, the curricula and the teachers than is the average minority group student. Such factors as age of the building, average size of rooms, distance of an auditorium, existence of a cafeteria and a gymnasium, number of free textbooks, number of recent texts, average number of library books per pupil, amount of training the teachers have, etc., are all factors in the achievement of students. Equality of Educational Opportunity; U. S. Government Printing Office; U. S. Department of Health, Education and Welfare; Washington, D. C.; 1966.

[21/] Cost-benefit, cost-effectiveness evaluation was not included in the original proposal, but grew out of negotiations with the U. S. Office of Education.

research stems in part from its value as a tool in measuring alternative ways of achieving the same objective.

An attempt was made in the present study to apply cost-effectiveness analysis to the intensively studied programs. This section is a discussion of our theoretical framework.

In other studies of vocational education in which cost-benefit analysis has been applied, the benefit emphasis has been on employment and earnings; that is, more regular employment for trainees following training, greater increases in earnings or decreases in welfare and unemployment costs for trainees than for a similar group who did not receive training.

The theoretical framework used here differs significantly from that noted above.

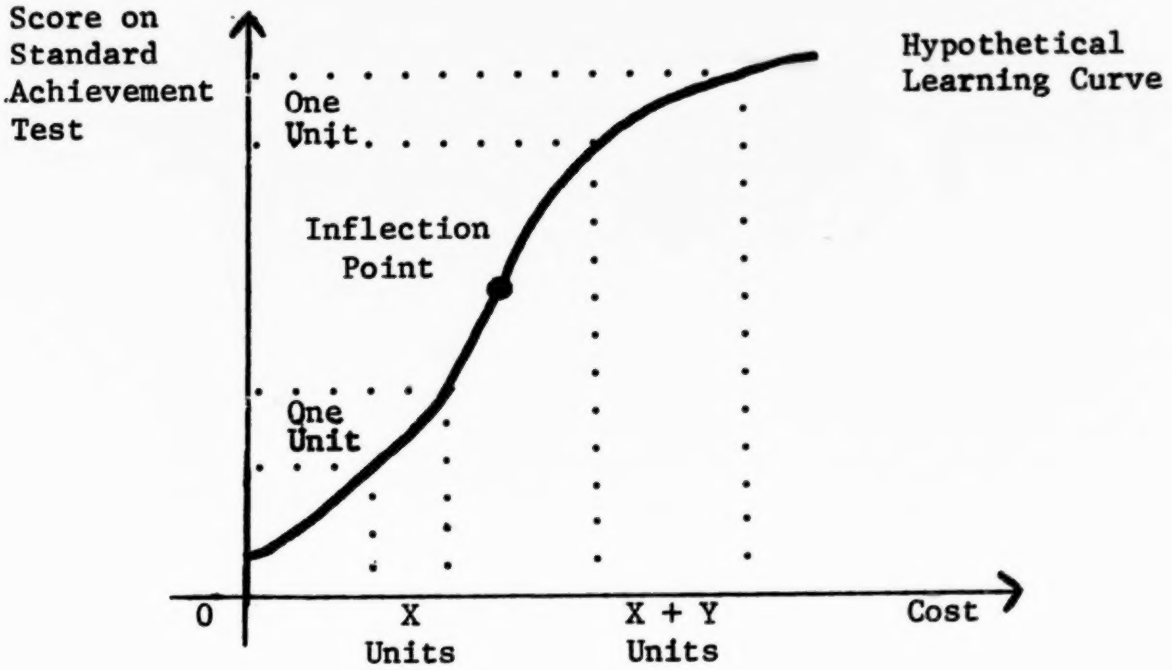
First, here the emphasis on the benefit side of the equation is on the following:

a. The increment in educational achievement associated with the extra cost of achieving that increment, e.g., "How much does it cost to raise reading or arithmetic achievement, for example one grade level?" Or, to put it in an equivalent way, "For a given cost, how many grade level increments in reading or arithmetic are possible?"

b. The increment in indices of basic intelligence associated with the extra cost of achieving that increment, e.g., "What are the extra costs associated with raising measured I.Q. by one unit?"

The following figure indicates in graphical terms what is meant by this marginal cost and the approach taken in this study.

Figure 1: Hypothetical Relation Between Educational Inputs and Educational Outputs.



The hypothetical learning curve, in cost-effectiveness terms represents the production function (See point 4, Appendix C) of the educational process. For a given student or an average group of students, at the beginning stage of their educational process, it may only cost "X" dollars in terms of teaching inputs to raise the student increment by one unit on an achievement test. The cost increment, "X" dollars, is the marginal or extra cost associated with raising learning achievement one additional unit, over the specific range of the total learning function or curve. However, as the process of education continues, the learning curve flattens out asymptotically so that it costs increasingly more for that particular student or class of students to achieve extra increments of learning. Thus, near the plateau of their attainable level of educational development, it now costs "X + Y" dollars to increase performance (as measured by an achievement test) by one unit. This cost of "X + Y" dollars is the marginal cost of achieving that particular increment of performance at that particular stage on the learning curve.

Second, which identified the different nature of this study is that on the cost side of the equation, the data have been limited to current cost data. This constraint was mainly imposed by the fact that detailed capital budget data were unavailable during the study time constraint.

Third, a further analysis in this study was of program elements that cost little or nothing to employ. These are non-money cost inputs or else resources freed from previous commitments by rearranging the structure of inputs in a program or set of programs.

The reader should recognize that the above emphasis does not preclude the performance of cost-benefit analysis of follow-up employment and earnings data when it exists. Rather, the objectives of this study focus on a different assignment of educational goals and priorities. We are interested in the learning process rather than the economic fruits of education.

Finally, in conducting such a study, these steps must be followed:

1. The objectives of the program must be specified.
2. Activities to carry out the objectives must be identified.
3. Achievement of the objectives must be defined.
4. It must be possible to relate achievement of the objectives to the activities that made for the achievement.
5. It must be possible to identify the cost.
6. The cost must be compared to the benefits.

These steps and how they might be carried out while emphasizing educational increments are discussed in Appendix C. As noted earlier, it was impossible in this study to carry out anything approaching a thorough cost-effectiveness study.

IV. METHODS AND TECHNIQUES

A. Introduction

This chapter summarizes methods and techniques employed in the study. We outline the steps taken in the preliminary identification of programs; the collection of program information; and the treatment of data.

B. Time: The Basic Constraint

A fundamental constraint in development of the study was time. The field work had to be completed within a predetermined time period. We started on March 11: Then came the Easter holiday, the April disorders in several study cities, and the summer closing of schools which started in late May. Thus, we had approximately two months to identify the study population, screen programs, and do the initial testing.

In the sections that follow, we describe the procedures employed within the framework of this constraint.

C. Criteria for Identifying and Selecting Programs

The process of selecting programs to include in the study involved the increasingly rigid application of the 16 criteria listed in Appendix D. Generally, these criteria focus on the extent to which programs serve the disadvantaged, the kinds of programs provided, the ability to control attrition, and the effect on achievement and placement.

D. Preliminary Identification of Programs

1. Initial Survey Techniques

Queries were made to the following:

a. By March 30 (the letters were first underway by March 15), a letter was in the mail to all State Directors of Vocational Education, Superintendents of school systems with student enrollments in excess of 50,000, State Directors of Special Needs Programs, and local units of the Urban League. Included with the letter was a brief questionnaire (Q-1) designed to collect identifying information on the school, characteristics of the population served, and the reasons for classifying the program as exemplary.

b. Professional associations were contacted.

c. Letters were sent to all Research Coordinating Units (RCU)22/ asking for referrals and inquiring about research studies on the disadvantaged.

22/ The "RCU's" are funded by the Bureau of Research in 44 states to coordinate vocational education research.

d. Personal contacts were made with staff members of the Division of Vocational and Technical Education and the Bureau of Research in the Office of Education, the ERIC Clearinghouse (Educational Resources Information Center) on Vocational and Technical Education,[23] and private non-profit groups such as the Ford Foundation and the Great Cities Project.[24]

e. Newspapers, magazines, books, and publications of professional associations were screened.

2. Qualification of Initial Referrals

Promising referrals identified by the above procedures were evaluated by telephone, site visits, and follow-up questionnaires.

By April 7th, referrals were available. From this, it became clear that only a small number could meet all the qualifying criteria. From evaluation of such factors as program size, availability of data, the representative nature of the sampling, or characteristics of students served, it was possible to conclude the others did not qualify. Most programs met some criteria and not others; or it was not possible to determine whether they fulfilled the criteria.

E. Development of Program Study Plans

Study plans were developed for three categories of programs. The first was composed of programs tentatively classified "effective." The next step was to gather more data on which to base a case study and quantitative analysis. The second category consisted of programs which, while not meeting the criteria for tentative inclusion in an "effective" category, nevertheless, were of sufficient interest to warrant further study. Inclusion in this category does not mean a program is of questionable value. Rather, it signifies for this study that:

a. The programs cover a wide range of relative effectiveness.

b. They may have been included to obtain representativeness in the large inner-city areas; because they serve a particular region of the country; or include a distinct minority or disadvantaged group.

c. They may represent an innovative idea or appear to be "one of a kind."

d. They may illustrate the relative range of effectiveness with a specialized group; e.g., Special Needs Program for the Mentally Retarded, or other types of Special Needs Programs for dropouts.

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[23] Ohio State University, 980 Kinnear Road, Columbus, Ohio 43212.

[24] The formal title is The Research Council of the Great Cities Program for School Improvement, 4433 W. Touhy Avenue, Chicago, Illinois.

e. They may illustrate the range of disadvantaged students being served; e.g., an effective program that serves a student population which is primarily middle class; it does not serve the highly disadvantaged.

Programs in the first two categories were labeled "intensively studied programs."

In the third category were programs still within the gray area; i.e., those on which the decision was not clear-cut as to the "effectiveness" or "representative" classification. The bulk of these programs were referred too late to be considered for inclusion and intensive study under categories 1 and 2 above. They were referred to as "non-intensively studied programs." Also included in this category were those programs that failed to meet the criteria used in the initial selection process.

The basic design was a simple pre-program and post-program comparison of dropout, achievement, and follow-up data. With the exception of pre-vocational programs, the student population studied were high school seniors in the 1967-68 classes.

In cases where pre-program achievement data were not available, an attempt was made to test in grades 10 and 11 to show the gains that might occur when matched populations are cycled through the program. An attempt was also made to evaluate placement procedures by comparing the achievement of students placed in "high" skill vocations with those placed in "low" skill vocations; a comparison of achievement of different ethnic groups within the same school; and sex differences within the same school.

F. Collection of Information

Mail questionnaires, school administered tests, standardized achievement tests in reading and arithmetic and interview schedules were used to collect specific data on the intensively studied schools.

1. Mail questionnaires and interview guides were designed to collect information in a standardized fashion on the characteristics of programs, students served, enrollment procedures, administration and cost data, and achievement, dropout, and placement statistics.

2. The intensively studied schools were provided data reporting forms upon which they were asked to place pre and post-program data on school-administered tests in reading, arithmetic, I.Q., and data on grade point average and personality. Space was also provided to record students' age, race, sex, and type of program in which enrolled.

3. Standaridized Achievement Tests. We aimed to test in all intensively studied schools. The test selected was Harcourt-Brace's

Stanford Achievement Test (SAT).[25] The Advanced Partial Battery, Form Y Test I: Paragraph Meaning, and Test 4: Arithmetic Computation were used. The total testing time was approximately 30 minutes for each test. The tests were machine scored with scores reported in terms of race, age, sex, and type of program.

Site visits were made to all intensively studied schools and to many of those not intensively studied. The purpose was to obtain standardized information on the factors responsible for program effectiveness. An effort was made to have two interviewers visit each school, although this was possible in only half the cases. Interviewer instructions and guides were standardized after initial testing. Approximately four to six hours were spent at each site. Four senior staff interviewers and eight field interviewers were used to initially qualify leads and to conduct on-site evaluations. The interviewers had previous experience in education and training evaluation. Their evaluations were independently verified by additional site visits when necessary, or telephone calls.

G. Treatment of Data

One of the purposes of this study was to compare school administered test data with the Stanford Achievement Test results. Unfortunately, this analysis could not be undertaken with the thoroughness dictated by good experimental design because of missing data and lack of standardized testing procedures.

As has been pointed out before, we established criteria for "truly effective" programs. Each of the actual programs surveyed was compared to this ideal to determine which came nearest to being "truly effective" and which were "better than average."

According to the proposal, effective programs would show increases in the academic achievement of the students, successful job placement, the retention of students, while providing quality vocational training. In order to make distinctions among programs in the study, norms were established for these criteria.

After selecting those programs which came closest to meeting established norms, each was analyzed to determine key elements which lead to success--those features that set the program apart from the regular program, but which are common to the effective programs. This determined the necessary, and to some extent, the unnecessary elements in effective programming.

It was assumed that to attain the "ideal" exemplary program, it would be necessary to combine the elements found in the various programs in various combinations. Thus, a blueprint can be made which shows how to establish a program which would approach the ideal.

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[25] This test was selected because Job Corps norms are available and because the study staff thought it would be in common usage in the programs studied.

H. Costs and Benefits of the Program

Lack of time and of data prevented follow-up studies of graduates or opportunities to study school financial records for cost data. As a result, these gaps exist:

> Cost per student data were unavailable for some programs because of school board disclosure policies, or because there was one central budget for the entire district making it fruitless to attempt to extract the portion spent on the program under study. Also, capital budget data was seldom available in a form that would enable comparative studies of programs.
>
> No economic follow-up data on earnings and employment of graduates is available for the majority of the programs studied because many are in their first year of operation. Further, many programs have no formal follow-up plan.

We decided to collect only two sets of cost data: current cost per student for the program and current cost per student in the regular high school program. These costs include:

1. salaries of principals, teachers, and other staff.
2. administrative costs--secretarial salaries, office supplies, etc.
3. cost of educational supplies; e.g., texts and library books.
4. auxiliary services such as health and pupil transportation.
5. maintenance of plant cost, wages, supplies, and utilities services.
6. operation of plant costs--wages, supplies and utilities.

This approach was selected for two reasons. The figure (or at least an estimate of the figure) was often readily available making it unnecessary to go through school channels to get more detailed information. Also, cost per student provides a clear, reasonably meaningful indication of what is being spent on the program.

Since the classroom teacher plays such a vital role, the programs were asked to give starting salaries. Of the intensively studied programs, seven did so as did 32 of the non-intensively studied programs.

Economic follow-up data on the first job after graduation were available for a few programs. Data were provided on the number who graduated from the vocational program, the number employed, and the number working on a training-related job. The schools were requested to send any follow-up studies done on the graduates. Very few responded.

In sum, the cost analysis approach is used here to obtain some notion of what effective programs cost, specifically in terms of:

1. What effective programs cost in comparison with regular high school education and what the cost range is;
2. Cost patterns--regional differences, cost differences by city size, type of program, and nature of the student body;
3. Outstanding deviations from the average.

V. RESULTS

A. An Overview

This chapter presents the major findings. The first section contains data on characteristics of programs and students; the second section presents program measurement data, and the third presents results of cost-effectiveness analysis.

Due to the diversity of the programs and gaps in the data, it is difficult to draw conclusions on the basis of quantitative information alone. The case studies of 30 intensively studied programs in Part II overcome, in part, the limitations of quantitative analysis.[26]

B. Characteristics of Programs and Students

1. Number and Source of Program Referrals

A total of 226 programs were reviewed and 186 were examined, but not intensively studied. A total of 40 were intensively studied with quantitative and qualitative information collected and verified. Case studies were developed on 30 of these.

The tables in Appendix E present: the number and sources of program referrals and the reasons individual programs were categorized for "intensive" and for "non-intensive" study.

Analysis of these tables shows that USOE Vocational Division staff, school superintendents and State Directors provided the most referrals and that "sufficient information not available" was the major reason for categorizing a program as non-intensively studied.

2. Kinds of Programs

While specific programs were being selected for intensive study, it was found that they could be grouped in several ways: by region, type of funding, vocational offerings, etc. In the process, it was decided that the focus of the intensive studies should be on categories of disadvantaged students; thus, the programs were grouped in terms of service to inner-city dropouts, rural and small city dropouts, mentally retarded, delinquents and non-English speaking students.

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[26] Throughout this analysis, programs are identified by case numbers as presented in the case studies in Part II.

3. Characteristics of Students Served

Table I lists the number of students served in the intensively studied programs by race and sex. These data illustrate that:

a. Average enrollment decreases proportionately to the total population of the category being served. Thus, inner-city programs are larger than rural, retarded, etc.

b. The average enrollments of the Mentally and/or Functionally Retarded programs in this study are higher than the average size of most programs serving this group. This is primarily because we tended to confine our analysis to those programs where the enrollment was in excess of 30 for statistical purposes.

c. There is a tendency for programs to contain more males than than females.

d. Inner-city program enrollments were predominently Negro because the study was concentrated on programs in inner-city slums.

TABLE I.

NUMBER AND TYPE OF STUDENTS SERVED IN 1967-68 SCHOOL YEAR BY TYPE OF INTENSIVELY STUDIED PROGRAM

			Sex		Racial Characteristics			
Program Category (1)	Program/ Case Number (2)	Total Number Students (3)	M % (4)	F % (5)	W % (6)	N % (7)	SS % (8)	Other % (9)
Dropout/ Potential Dropout- (Inner City/ Large Suburban Areas)	1	855	50	50	33	33	33	1
	3	1/	0	0	0	100	0	0
	7	855	0	0	1	99	0	0
	9	445 2/	0	0	0	0	0	0
	10	240	67	33	75	25	0	0
	12	288 3/	67	33	10	90	0	0
	13	650	72	28	55	45	0	0
	15	96	50	50	0	99	1	0
	16	43	84	16	80	20	0	0
	19	375 3/	60	40	79	20	0	1
	20	318	55	45	0	100	0	0
	22	7,329	55	45	85	15	0	0
	23	30	89	11	1	93	6	0
	25	135	60	40	88	12	0	0
	27	425	80	20	65	35	0	0
	33	550	57	43	62	37	0	1
	34	500	0	100	2	62	36	0
	35	841	100	0	51	31	18	0
	36	24	100	0	79	4	13	4
	39	200	40	60	21	49	30	0
	40	111	50	50	8	83	0	9
	Average	715	63	37	40	53	6	1
Dropout/ Potential Dropout (Rural and/or Small City/ Suburban	14	85	56	44	5	20	75	0
	17	86	64	36	72	28	0	0
	21	33	0	100	0	100	0	0
	26	400	100	0	67	30	2	1
	28	160	88	12	88	12	0	0
	29	529	53	47	94	6	0	0
	30	41	71	29	63	37	0	0
	31	650	0	0	0	0	0	0
	37	233	55	45	93	7	0	0
	41	62	100	0	0	100	0	0
	Average		65	35	53.5	37.8	8.6	0.11
Mental and/or Functionally Retarded	4	330	63	37	1	99	0	0
	6	152	65	35	54	41	2	3
	8	82	100	0	0	99	0	1
	11	144	64	36	60	38	2	0
	38	350	66	34	1	99	0	0
	24	40	50	50	85	15	0	0
	Average	183	68	32	33.5	65.1	0.7	0.7
Delinquents	2	32	0	100	74	1	25	0
	5	120	0	100	20	80	0	0
	Average	76	0	100	47	40.5	12.5	0
Non-English Speaking Minorities	32	56	65	35	0	0	0	100 4/
	Average	459	61	39	41.4	49.0	6.4	3.2

1/ Program is not yet fully underway
2/ Approximate figure
3/ Average attendance
4/ American Indian

4. Length of Time Programs Have Existed

We found an insufficient number of programs in existence more than two years. In fact, about half the programs had been in existence less than one year.

5. Types of Vocational Offerings

Trade and industry programs were most numerous, followed by home economics, office occupations, and work study programs. The stress in inner-city programs is on cooperative work-study, technical, and health occupations. Emphasis in rural programs is on agriculture and home economics. The types of training offered the mentally and functionally retarded are spread across the total range of possible training in unskilled and semi-skilled manual jobs.

C. Program Effectiveness Measures

1. School Administrators' Viewpoints

A total of 103 program referrals resulted from the initial survey instrument sent to school administrators and others. Their reasons for identifying a program as exemplary was analyzed and categorized into five categories. In order of importance they are: Recruitment (the program has an open door and is designed to serve the needs of the disadvantaged); Placement, Behavior, Achievement, and Retention.

The next step was an analysis in terms of common factors that ran through all programs. We developed these five categories: Supportive, Vocational, Behavioral, Administrative, Academic.

Supportive type statements were most frequently offered. They are typified by "counselors who understand trainees, and are firm," "teacher works beyond call of duty," "meets student needs," etc. Academic and administrative factors were not frequently mentioned.

All in all, the above analysis was not very rewarding because the statements were broad generalizations which did not focus on specific elements.

2. Results of Cases Studied and Program Analysis

We found 25 common elements of effectiveness in intensively studied programs. They are:

1. Structured programming with built-in flexibility.

2. A career ladder within the vocational offerings.

3. Teaching techniques that allow students to study and progress at their own rate of speed; use of multi-media, self-instructional, and team teaching approaches.

4. Maximum academic class size of 20 and small school enrollments.

5. Academic studies integrated with vocational studies.

6. Pre-vocational programs which provide opportunity for exploring different occupations.

7. Equipment and facilities keyed to actual requirements for entry-level work in the vocational fields.

8. Periodic up-dating of skill offerings, equipment, and teaching materials through consultation with local industry and vocational consultants.

9. Orientation in social skills, self-perception, attitudes, and world-of-work.

10. Articulation of eleventh and twelfth grades with pre-vocational and post-vocational training.

11. Opportunity to earn while learning. Students receive credit for work experience.

12. One or two key people who make the program go, who encourage imagination and set the "climate."

13. Maximum vocational class size of 15 without watered down standards.

14. Strong counseling support, use of multi-agency services, extra-curricular activities and system of rewards and incentives.

15. High employment placement record, based upon teacher recommendation and/or special efforts involving use of school personnel to develop jobs.

16. Extended school day and/or school year.

17. A mix of disadvantaged with non-disadvantaged; integration of achievers with non-achievers, including the retarded.

18. Non-punative, systematic achievement measurement program.

19. Involvement of students, parents, and community with the schools in order to attract the disadvantaged, and to quickly correct problems.

20. Racially integrated faculty in programs with sizable minority enrollment, indigenous teacher aides, and emphasis on indigenous culture of the disadvantaged population.

21. Positive and youthful teacher attitudes toward the disadvantaged student combined with previous teaching experience.

22. Good teacher-principal relations, with emphasis on supportive role of supervision.

23. System of feedback, based on student performance on the job, with resulting impact on curriculum.

24. Aim of the program is broad behavioral change and growth.

25. Treating disadvantaged groups positively as special groups with unique and desirable attributes.

A detailed explanation of these elements of effectiveness is contained in Appendix F.

3. Recruitment and Selection

There was no useful quantitative data on recruitment and selection. Procedures ranged from relatively sophisticated public relations attempts to mechanical type referral techniques. The reader is referred to the case studies in Part II for illustration of effective-ineffective recruitment techniques.

We found wide variation in terms of whether programs "screen out" or have an "open door" to the disadvantaged. We turned this variation to our advantage in selecting schools to be intensively studied. Schools were selected on a continuum starting with those serving the most disadvantaged (that is, students from families meeting Title I (ESEA) income guidelines, the mentally retarded, etc.)

4. Achievement Testing Results

Tables II. and III. summarize achievement test data. This data, as described earlier, is the product of two approaches. The first was to request administrators of programs to forward available reading and arithmetic achievement scores on all students. The second involved the administration of the Stanford Achievement Test (SAT), (both Reading and Arithmetic sub-tests) to students in the programs.

Table II. contains a summary of all reading achievement information which was obtained by both approaches. Three main headings of test results are presented, the first two representing data provided by schools and the third containing the SAT scores. An attempt was made in analyzing the achievement data to obtain information for the same students from pre-test to post-test to SAT testing. Where this was possible, the N (number) is indicated under pre-test, with the notation (M), for matched, under post-test and SAT. Where this matching was not feasible, separated N's are provided. The name of the test used by the schools is indicated. Average grade, or date where grade was unavailable, at which tests were administered, and average score obtained on tests are presented in Table II.

Of the 21 schools we have categorized as Dropouts/Potential Dropouts (Large Inner-City/Suburban), useful reading achievement data was provided on only 11 schools. Of the 11, only five provided some measures of pre and post-test data, i.e., an objective index of student progress. For the other four categories of programs, there was a similar weakness in the amount of information supplied, both as to the number of schools sending data and the number of students whose scores were submitted.

These students are thought of as "terminal" cases in the clinical sense. By and large, they are expected to fail and hence are not tested to measure movement. The students come to the programs as a result of some objective assessment (frequently based on the pre-test, however far back it may be) but are rarely tested again.

Another major finding in Table II is the general lack of increase in achievement test scores from pre to post-test. This trend may be seen both for schools which administer pre and post-tests and schools for which the post-test measure was the SAT. While there is a short-term gain, the overwhelming evidence is of little achievement gain. In fact, if one looks at the difference between grade level and reading level for each school, the finding is for much greater retardation at post-test than at pre-test.

There are some very obvious discrepancies in Table II which should be noted. For example, Case 19 shows a significant achievement score increase. However, this is true only for measurement on the Gates test. There is a lack of agreement between the Gates and the SAT, a difference of about one and one-half reading grades. The reason for this deviation is not clear; however, part may be attributed to the differences in testing instruments and part to possible adverse conditions under which the SAT was administered. An even larger discrepancy between post-test measures is found for program 17, being of such extreme nature as to cast doubt on the otherwise startling increase reported by the school.

The third significant result in Table II is the very low absolute reading level of students. By scanning the data from the SAT tests from four to five grades, we found that for some programs the average reading level is barely above functional literacy. In seven of nine inner-city schools on which SAT data were collected, the mean scores of seniors or the equivalent age group were between the seventh and eighth grades. In the other two schools, students were slightly below the seventh grade. For four rural schools, the range was greater, from 5.6 to 8.4. The two schools for the retarded had mean scores between grades 4.0 and 4.5, while the one school for delinquents was at the 5.3 grade level.

Table III contains data on arithmetic achievement and is organized as in Table II. The findings from Table III are much the same as those presented above. There is a general lack of data, a reduction in arithmetic performance over time relative to the norm for the grade, generally inconsistent findings between the two post-testings and an extremely depressed achievement level for students. There was, however, a generally greater range of scores on arithmetic than on reading achievement. For the nine inner-city programs the range of mean scores was from 5.6 to 8.2, about half a grade level lower than on reading. The four rural schools ranged from 5.9 to 8.9. The two schools for the retarded had mean SAT-arithmetic scores of 4.5 and 4.7, while in the school for delinquents, the mean was 4.6.

Table IV presents the results of the SERD-SAT administered tests. It contains, for reading and arithmetic sub-tests, separately, the average scores for the total of 1,305 students on whom usable data were obtained, and breakouts by sex, race and age. Although not appearing in the Table, the average grade of those tested is between the eleventh and twelfth. The main findings appearing in Table IV are:

1. The students tested are between four and five grade levels below the norm for their grade on both reading and arithmetic achievement, as derived by comparing the mean scores for reading (7.2) and arithmetic (6.9) with the norm of between 11 and 12.

2. The overall mean score for reading achievement is slightly higher than that for arithmetic achievement.

3. There is no difference between the sexes on arithmetic achievement, an atypical finding since males normally score higher. On reading achievement, the more usual finding remains, that of females scoring somewhat higher.

4. There are no differences among the racial sub-groupings on reading achievement; however, Negroes score about one-half a grade level below whites and others (American Indian, Spanish American, Orientals, etc.) on arithmetic achievement.

5. For both reading and arithmetic achievement, there appears to be a tendency for scores to raise with age. The relationship is much more pronounced for arithmetic achievement, with an increase from the 6.4 level for those 15 years old and under to 7.3, for those 20 years old and over.

TABLE II.

PRE AND POST-READING ACHIEVEMENT DATA FOR INTENSIVELY STUDIED SCHOOLS

Program Category (1)	Program/ Case No. (2)	Pre-Test				Post-Test				SAT (SERD)		
		N (3)	Test Used (4)	Grade or Date 1/ (5)	Score (6)	N (7)	Test Used 4/ (8)	Grade or Date (9)	Score (10)	N (11)	Grade or Date (12)	Score (13)
Dropouts/ Potential Dropouts (Inner-City/ Large Suburban Areas)	1									106	17.5 3/	7.9
	7	151	MA	8	7.2					(M)	12	7.7
	12	109	IA	10.2	8.1	(M) 5/	IA	11.0	8.5	(M)	17.3	7.7
	13	77	CT	2/	5.9	(M)	CT	(9 weeks later)	6.5			
	15	19	SAT	8.4	7.1					(M)	12	6.9
	16	23	MA	9-67	5.4	(M)	MA	9-68	5.8	(M)	9	5.6
	19	28	GSGO	8.1	5.7	(M)	GSGO	11.2	8.8	(M)	11.2	7.3
	27	12	SAT	8	6.6							
	34	87	MA	8.1	5.8	(M)	MA	11.2	6.4	(M)	12	6.0
	35	137	SAT	8.6	6.8					(M)	12	7.1
	36									12	10	7.1
	39	13	SAT	9.1	7.9					(M)	12	7.5
	40	17	SAT	8.9	7.5					(M)	12	6.7
Dropouts/ Potential Dropouts (Rural and Small City/ Suburban)	14	80	CT	10-67	6.6	(M)	CT	5-68	7.2			
	17	24	SRA	8.0	5.0	(M)	STS-EDS	9.7	8.2	(M)	12	5.8
	26	238	WR		7.5					(M)		7.4
	21	10	IA	7.5	4.5	(M)	IA	8.5	4.6			
	26	238	WR		8.0					(M)		7.3
	29									60	12	8.4
	37									22	12	5.6
	41	9	IA	7.7	3.2	(M)	IA	8.7	3.6			
Mental and/or Functionally Retarded	4	80	MA	9-66	3.5	(M)	MA	9-67	3.8			
	6	14	Various	Unk.	Unk.	69	MA	6-67	3.9			
	8	13	Unk.	7.2	4.1					(M)	12	4.7
	11	19	GO	1965	2.6	(M)	GO	1968	3.7	(M)	12	4.1
Delinquents	2	4	WR	9.8	7.9	(M)	WR	10.8	7.5			
	5		Local Norms	Local Norms			Local Norms	Local Norms		35	Unk.	5.3
Non-English Speaking Minorities	32	34	6/	8.1	1.4							

1/ Grade refers to average grade at which test was administered. Date refers to date of test if grades were not given.

2/ Grade information unavailable. Please note, however, when post-test was administered.

3/ Average age used because school is ungraded.

4/ TESTS: MA - Metropolitan Achievement Tests: IA - Iowa Achievement Tests; CT - California Achievement Tests; SAT - Stanford Achievement Tests; NYAT - New York Achievement Tests; GSGO - Gates Silent and Grade Oral; SRA - STA Achievement Series; STS-EDS - Scholastic Testing Service - Educational Developmental Series, Form A; WR - Wide Range; GO-Grays Oral

5/ (M) Same students as in pre-test.

NOTE: The only test data available for Programs 1, 36, 29, and 37 was the SAT administered by SERD. SERD did not administer tests in Programs 13, 27, 14, 21, 41, 4, 6, 2, and 32.

TABLE III.

PRE AND POST-ARITHMETIC ACHIEVEMENT DATA FOR INTENSIVELY STUDIED SCHOOLS

Program Category (1)	Program/ Case Number (2)	Pre-Test				Post-Test				SAT (SERD)		
		N (3)	Test Used (4)	Grade or Date 1/ (5)	Score (6)	N (7)	Test 4/ Used (8)	Grade or Date (9)	Score (10)	N (11)	Grade or Date (12)	Score (13)
Dropouts/ Potential Dropouts (Large Inner-City/ Suburban)	1									105	17.5 3/	7.5
	7	150	MA	8	7.3					(M)	12	6.6
	12	112	IA	10.2	7.7	(M)5/	IA	10.8	8.3	(M)	17.3	7.8
	13	77	CT	2/	5.3	(M)	CT	(9 weeks later)	6.3			
	15	17	SAT	8.4	6.9					(M)	12	6.5
	16	23	MA	9-67	5.4	(M)	MA	9-68	5.8	(M)	9	5.3
	19	28	Unk.	8.0	6.4					(M)	11.2	6.6
	27	12	SAT	8	7.0							
	34	87	NYAT	8.2	6.6	(M)	MA	11.2	8.9	(M)	12	7.1
	35	135	SAT	8.4	6.8					(M)	12	7.1
	36									12	10	6.1
	39	12	SAT	9.1	8.4					(M)	12	8.2
	40	9	SAT	8.9	7.4					(M)	12	6.7
Dropouts/ Potential Dropouts (Rural and Small City/ Suburban)	17	24	SRA	8.0	5.8	(M)	STS-EDS	9.7	8.7	(M)	12	6.0
	21	10	IA	7.5	4.4	(M)	IA	8.5	4.8			
	29									60	12	8.9
	37									22	12	5.9
	41	9	IA	7.7	3.3	(M)	IA	8.7	3.6			
Mental and/or Functionally Retarded	4	80	MA	9-66	4.8	(M)	MA	9-67	4.9			
	6	14	Various	Unk.	Unk.	70	MA	6-67	4.5			
	8	13	Unk.	6.2	4.1					(M)	12	4.5
	11	12	Unk.	5.8	3.7					(M)	12	4.7
Delinquents	2	4	WR	9.8	8.3							
	5		Local Norms	Local Norms			Local Norms	Local Norms		34	Ungraded	4.6
Non-English Speaking Minorities	32	33	6/	8.06	2.3							

1/ Grade refers to average grade at which test was administered. Date refers to date of test if grades were not given.

2/ Grade information unavailable. Please note,however,when post-test was administered.

3/ Average age used because school is ungraded.

4/ TESTS: MA - Metropolitan Achievement Tests; IA - Iowa Achievement Tests; CT - California Achievement Tests; SAT - Stanford Achievement Tests; NYAT - New York Achievement Tests; GSGO - Gates Silent and Grade Oral; SRA - STA Achievement Series; STS-EDS - Scholastic Testing Service - Educational Development Series, Form A; WR - Wide Range; GO - Grays Oral Achievement.

5/ (M) Same students as in pre-test.

6/ Teachers' judgments based on graded materials.

TABLE IV.

READING AND ARITHMETIC ACHIEVEMENT FOR TOTAL STUDENT POPULATION ACCORDING TO SEX, RACE AND AGE CATEGORIES

	SEX				RACE						AGE							
	Reading		Arithmetic		Reading			Arithmetic			Reading				Arithmetic			
	Male	Female	Male	Female	Negro	White	Other	Negro	White	Other	15 and Under	16-17	18-19	Over 20	15 and Under	16-17	18-19	Over 20
N 1/	786	518	786	518	604	545	78	604	545	78	75	649	479	102	75	649	479	102
$\overline{X}$ 2/	7.0	7.5	7.0	6.8	7.1	7.3	7.2	6.7	7.2	7.1	6.9	7.1	7.4	7.3	6.4	6.8	7.1	7.3
S.D. 3/	2.4	2.1	2.4	2.1	2.2	2.5	2.1	2.2	2.4	2.6	2.1	2.2	2.4	2.6	2.0	2.2	2.5	2.5

1/ Number

2/ Mean

3/ Standard Deviation

5. I. Q. Test Information

Officials of the programs were requested to provide I.Q. scores on all seniors. Table V summarizes the data received by program, indicating the number of students on whom usable scores were provided, the test used, and the average I.Q. of students. There are two additional columns in the table containing the actual percentage of students with I.Q.'s below 75 and an estimated percentage of students with I.Q.'s below 75 obtained from the Q-4 questionnaire.

Data were provided by only a little over half the programs, specifically 22 out of 40. It is not known whether the I.Q. picture for all the schools would follow the results in Table V. In addition, I.Q. scores were not provided on every student in the program, there being considerable missing information.

An important finding in Table V is the low average I.Q.'s. For the twelve inner-city programs, the average I.Q. (about 88) is more than one standard deviation below the national mean of 100. There exists, however, quite a range among schools, from the approximately 80 for Case Number 13 to the 93 to 94 for Case Numbers 12 and 7. The higher scores for Case Numbers 1, 19, and 36 cannot be seriously considered because of the small number of students upon whom information is available. This wide variation among schools may also be seen throughout the other three categories of programs. As expected, by definition, the mean I.Q.'s for schools with students classified as mentally or functionally retarded are considerably lower.

It was not possible to conduct a comprehensive analysis of differences between actual and estimated percentages of students with I.Q.'s below 75 because of missing data. Nevertheless, from the 14 schools on which both sets of figures are available, it can be calculated that: for nine there is less than a 10% discrepancy (five estimates are between 10% and 20% higher than actual, and there are four estimates lower than actual: one 10%-20%, two 20%-30% and one 30%-40%).

6. Other Behavioral Indices

We attempted to obtain a wide variety of behavioral indices of student change. Schools were requested to provide any objective measures of behavioral characteristics that might be available. The extremely poor response to this request has been pointed out in sections dealing with achievement test results and I.Q. test information. However, even less information was provided with regard to grade averages and other behavioral data.

Specifically, only about a dozen schools provided any sort of grade averages, and in many cases, there was a considerable amount of missing information. However, some programs complied fully with SERD's request and provided very complete and easily interpretable grade averages. Despite this, it was not felt that there was sufficient information to warrant any sort of summary analysis.

The other behavioral data, such as personality and interest test scores, were not made available and could not be analyzed. For the few schools that did have this information, it was reviewed and considered in the preparation of the case studies.

TABLE V.

MEAN I.Q. DATA FOR INTENSIVELY STUDIED SCHOOLS BY TYPES OF PROGRAM

Program Category (1)	Program/ Case Number (2)	N (3)	Measure Used (4)	(5)	Per Cent Below 75 (6)	Per Cent Estimate by School Below 75 (From Q-4) (7)
Dropouts/ Potential Dropouts (Large Inner-City/ Suburban)	1	8		111.4	0	<5
	7	165		93.6	1.2	3
	12	101		93.0	2.0	
	15	27		87.0	7.4	
	16	29		86.2	10.3	12
	19	7	Stanford Binet	99.3	0	
	20	60		84.4	23.3	0
	27	33	California Metal Maturity	88.8	0	1
	36	7	Chicago Vocational	97.7	0	8
	39	13		92.8	0	
	40	16		90.1	6.3	
	13	186	California Mental Maturity	79.9	35.0	10
Dropouts/ Potential Dropouts (Rural and Small City/ Suburban)	14	55		86.9	10.9	10
	17	49		85.7	10.2	
	21	8		62.1	100.0	100
	41	17		61.4	94.1	100
Mental and/ or Functionally Retarded	4	397	Stanford Binet	72.5		
	6	70		66.6	72.9	100
	8	38		70.2	71.1	35-40
	11	38	Wechsler Intelligence Scale for Children	82.3	36.8	
Delinquents	2	27	Otis	94.4	7.4	<1
	5	30	Philadelphia Mental Ability	81.4	33.0	

7. Dropout Data[27]

We attempted to obtain retention and dropout data.

Table VI presents dropout data for large inner-city programs. The nine inner-city programs report rates covering a range from 1% to 68%. Programs are grouped according to the degree to which they enroll the disadvantaged. For some, a 60% or 40% dropout rate might be a commendable figure when compared with previous rates in another program for a similar population in the same city. The nature of the schools (public, vocational education only, court assigned students, revolving short programs), has a great deal to do with the dropout rate. Some programs are designed to accommodate high dropout averages since they are continuation schools or schools that "hold" dropouts from other high schools until the students may legally leave (the age for leaving varies from 16 to 18 years according to state laws).

In the large city schools, it is possible to distinguish degrees to which programs enroll the disadvantaged and how this may affect dropout rates. We have grouped the schools homogeneously by family, socio-economic status, racial composition of the student body, and student I.Q. This analysis is shown in Table VII.

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[27] Dropout data was obtained from the Q-4 questionnaire.

TABLE VI.

DROPOUT DATA FOR DROPOUTS/POTENTIAL DROPOUTS
LARGE INNER-CITY/SUBURBAN AREAS

Program/Case Number		Comprehensive with Vocational Education (Per Cent)	Vocational Education Program Only (Per Cent)
1		--	--
7		20.0	--
9		--	--
10		--	5.0
12		14.0	--
13		68.0	--
15		23.0	--
16		2.0	--
20		1.0	--
27		--	--
33		--	--
35		40.0	40.0
36		--	33.0
Large City Averages:[1/]			
Comprehensive	Vocational	Average[2/]	Average[2/]
29	49	21.3	26.0

[1/] Averages for large city schools, comprehensive and separate vocational, from Office of Program Planning and Evaluation, U. S. Office of Education, July 27, 1967 (preliminary report), p. 28. Project Talent data in same report lists national rate for comprehensive school vocational program as 22.4%.

[2/] A total of 10 inner-city schools did not report dropout data. The total presented here represents fewer than half the number of schools in the study. It should be interpreted as an indication, not as an absolute figure.

TABLE VII.

COMPARISON OF INNER-CITY/LARGE SUBURBAN AREA DROPOUT DATA FOR HIGHLY DISADVANTAGED SCHOOLS VERSUS MODERATELY DISADVANTAGED SCHOOLS

Highly Disadvantaged	
Program/Case Number	1967-68 Program Dropout Rate Per Cent
12	14.0
13	68.0
15	23.0
35	40.0
36	33.0
Average	35.6

Moderately Disadvantaged	
Program/Case Number	1967-68 Program Dropout Rate Per Cent
7	20.0
10	5.0
16	2.0
20	1.0
Average	7.0

Clearly, the very disadvantaged populations have higher dropout rates. Again, this must be viewed in terms of alternatives to the existing programs. The "high" dropout rates may be "low" for these schools, or schools with similar populations in comparative communities.

Table VIII presents Rural and Small City/Suburban dropout data.

TABLE VIII.

DROPOUT DATA FOR RURAL AND/OR SMALL CITY/SUBURBAN PROGRAMS

Program/Case Number	1967-68 Program Dropout Rate: Comprehensive with Vocational Education (Per Cent)	1967-68 Program Dropout Rate: Vocational Education Program Only (Per Cent)
14	2.3	--
21 (41)	4.0	--
26	26.0	--
28	--	15.0
29	--	4.5
30	6.8	--
37	4.3	--
National Averages[1]		
All school data: 28%	8.7	9.8

[1] Two schools in this category did not report dropout rates.

Rural schools report less of a dropout range than the inner-city schools, 2.3%-26.0%. They are a smaller sample, but also the rural or suburban student population may not be as likely to drop out as the large city student population because of fewer available alternatives. This is difficult to document. It should be noted that four of the rural programs under study (Program/Case Numbers 14, 21, 26, and 28), report a 1967-68 average dropout rate of 10.2% and a previous program rate of 21.3%, a decrease in dropouts of over 50%. This is the kind of significant improvement possible when effective programs, designed to "reach" the students, are implemented.

Dropout data for the mental and/or functionally retarded follows in Table IX.

TABLE IX.

DROPOUT DATA FOR MENTAL AND/OR FUNCTIONALLY RETARDED

Program/Case Number	1967-68 Program Dropout Rate	
	Comprehensive with Vocational Education (Per Cent)	Vocational Education Program Only (Per Cent)
4	1.0	41.0
6	1.0	
8		13.0
11		16.0
24	5.0	
National Average[1]	Average	Average
28%	3.0	23.0

[1] National high school dropout rate for the class of 1967, based on retention rate reported in *Statistical Abstract of the United States*, 1967, p. 118. *Project Talent* unpublished data lists national vocational program within comprehensive schools as 22.4%. Vocational only schools would be likely to have a higher dropout rate than this figure.

Delinquent students and non-English speaking students are unusual categories and should not be compared with national averages for school dropouts. These students have extreme handicaps of a different nature from city or rural dropouts and potential dropouts.

Three of the schools for the mentally and functionally retarded reported previous program dropout rates. In these programs (Case Numbers 4, 6, and 8), the 1967-68 dropout average was 18%, and this, compared to the previous average of 33%, results in a decrease of 44%. For these students, an improved vocational program apparently made a great difference.

The number of programs (3) in Categories IV and V, Delinquents and Non-English Speaking Minorities are too small for meaningful analysis.

For all categories, the comprehensive schools with vocational education courses have lower dropout averages than the purely vocational programs. This is also true on a national level. The schools under intensive study have lower than national average dropout rates in both comprehensive and vocational programs. This may be attributed to the better than average curricula and other features of the programs in these schools.

8. Placement and Follow-up Data

Table X shows available follow-up data. Out of 40 schools in the sample, only 21 were able to provide data which, at the very best, is sketchy and unreliable.

Schools do not keep good records of placement and success in following up graduates. Information for curricula modification is even less available. Generally speaking, inner-city data is more complete than other categories.

In summary, our follow-up data indicate:

1. The most reliable data comes from small programs. The apparent reason: the role of the school staff in placement is greater (than in large programs) and the informality of these programs makes follow-up checking simpler.
2. Some of the large city school systems are now making an attempt to follow-up their vocational graduates, but they have far to go.
3. Follow-up data are reported only for the first job after graduation.
4. Many programs are too new to have follow-up.
5. Wage data are seldom available.
6. Our results show that few of the students are pursuing post-graduate training.

D. Cost-Effectiveness Results

Tables XI and XII describe cost data:

1. Costs are based on current expenditures. Capital expenditures are excluded because of unavailability of data and because much of the capital cost could not be pro-rated among different programs in the same schools, since for all practical purposes they are joint costs.
2. These are average costs of training a given disadvantaged or regular day school student. The marginal or extra costs of training an additional student cannot be statistically estimated because of the disparate nature of these programs and the paucity of data. Thus, it was impossible to gain proper cost effectiveness analysis.
3. The unit of observation is the program, and only 11 usable observations exist. The addition or deletion of one program would likely result in a major shift in the function for all programs combined.

TABLE X.

COURSE INFORMATION AND FOLLOW-UP DATA FOR INTENSIVELY STUDIED SCHOOLS BY TYPE OF PROGRAM

Program Category (1)	Program/ Case Number (2)	Number of Vocational Offerings (3)	Length of Training (in years) (4)	Number of Graduates (5)	Graduates Immediately Placed on Jobs (6)		Graduates Immediately Placed on Training Related Jobs (7)		Graduates Pursuing Post-Graduate Training (8)	
					No.	Per Cent	No.	Per Cent	No.	Per Cent
Dropouts/ Potential Dropouts- (Large Inner-City/ Suburban)	7	14	1-4	323	180	55.7	150	46.4	100	30.9
	12	1	1	65	--	--	--	--	--	--
	13	6	2	1/	--	--	--	--	--	--
	16	2	1	43	30	69.8	--	--	--	--
	20	6	2-3	123	18	14.6	18	14.6	--	--
	27	1	3	100	90	90.0	--	--	--	--
	34	5	2-3	121[2/]	121	100	121	100	18[3/]	14.9
	35	9	4	130	56	43.1	51	39.2	39	30.0
	36	3	1-2	5/	--	--	--	--	--	--
AVERAGE		5.2	2	140	51.5	53.1	85	50.1	52.3	25.3
Dropouts/ Potential Dropouts- (Rural and Small City/ Suburban)	15, 39, and 40	3	2	261	192	73.6	192	73.6	141	54.0
	26	14	21-43 (Weeks)	288	199	69.1	--	--	--	--
	28	1	2	4/	--	--	--	--	--	--
	29	20	1-2	100	55	55.0	27	27.0	--	--
	31	11	1-4	4/	--	--	--	--	--	--
Mental and/or Functionally Retarded	8	12	3-6	88	80	90.9	15	17.0	0-1	1.0
	11	6	varies	1/	1/	100	--	--	--	--
	24	5	varies	5	--	--	--	--	--	--
	38	15	4	61	61	100	60	98.4	--	--
Delinquents	2	3	6 mos.- 1 yr.	25	4	16.0	--	--	11	44.0

1/ Not Applicable
2/ Practical Nurse and Nurses Aide only
3/ 18 of LVN program are in college; for all career fields, 27 are now in college
4/ Not Available

By assuming that the addition of one more student to a program would not increase or decrease average cost (not an unreasonable assumption) one can argue that the marginal or additional cost is equal to the average cost. Marginal differences in program costs per additional student are assumed to be the same as the average cost.

Table XI shows cost per student and cost per student hour. Also presented is a brief explanation of how the figures were derived. The first finding is that rural programs spend less than inner-city programs. The second finding is that in terms of student cost per hour, these programs are relatively inexpensive. With the exception of Program Number 25, the program costs range from about $2.00 to about $4.00 per student hour. The average cost per student hour, for those programs on which there is appropriate cost data, is $1.24 per hour.

In Table XII, columns 3 and 4 present rough estimates of marginal as well as average current cost per student based on the above assumptions. Column (5) in Table XII represents the differences in marginal or average cost between disadvantaged and regular students. We found that average current costs for the regular school program are lower than for the intensively studied program. It is not possible to compare rural with inner-city groupings because of the small number of observations.

Table XIII presents a listing of the factors of effectiveness previously presented, together with an indication of whether they are cost or non-cost items. By cost items, we mean that additional funds are required to implement a given item.

At this point, it is necessary to caution the reader to remember that "high cost" does not necessarily imply "high quality." Second, "high cost" does not imply that a program is "too costly." These costs must be related to the benefits of their respective programs. Then, and only then, by determining the program with the highest extra benefits for a given marginal cost, can one rank the programs as to their relative desirability.

Finally, for one performance index, dropout reduction, for example, a program may have one rank in terms of cost-effectiveness, but the relative rank of this program may change on the basis of a different performance index such as earnings or improvement in measured I.Q.

TABLE XI.

PROGRAM COST PER STUDENT AND COST PER STUDENT HOUR IN INNER-CITY, RURAL AND MENTALLY RETARDED PROGRAMS

(Based on current expenditure figures)

Program Category (1)	Program/ Case Number (2)	Program Cost/ Student (3)	Program Cost/ Student Hour (4)	Explanatory Notes on Computation of Cost Per Student Hour (5)
Dropouts/ Potential Dropouts (Large Inner-City/ Suburban)	10	$2,137	$3.95	3 hrs./day in school; 36 weeks to compute yearly hours current budget ÷ 121.4 = $2.137 (121.4 = average daily attendance.)
	13	$ 670	$ .64	1,050 student hours/year; 6 hours/day; cost/student based on current budget.
	20	$ 445	.44	Hour figure derived by counting days in school from calendar and multiplying by 6 periods/day.
	25	$ 350	$7.46	Per hour figure based on average days attended for 101 students. Some overstatement because total budget not entirely used.
	27	$ 588	$1.09	3 hours per day; 36 weeks.
	34	$1,470	$1.42	188 days; 27.5 hours/week 1,034 hours/year.
	36	$1,200	$2.22	Cost includes only basic equipment and salary cost. Accuracy open to question 3 hours/day: 36 weeks.
Average N=8		$1,041	$2.33	
Dropouts/ Potential Dropouts (Rural and Small City/ Suburban	14	$ 325	$ .23	8 hours/day; 36 weeks
	21	$ 305	$ .32	160 days minimum requirement for graduation. 6 hours/day
	26	$1,400	NA	Cannot compute cost/student hour: Instructional costs do not include student stipend; no data available for proportion of students who go 3, 6, or 12 months.
	28	$ 750	$1.43	Cost/student = total operating cost Sept. enrollment; 35 weeks; 15 hours/ week.
	37	$ 962	$1.60	40 weeks; 15 hours/week.
	41	$ 305	$ .32	160 days minimum requirement for graduation, 6 hours/day.
Average N=5		$ 748	$ .90	
Mental and/or Functionally Retarded	4	$ 475	$ .49	Eight 40 minute periods per day; 36 weeks; 26-2/3 hours, 36 weeks 959.8 hours. 475 x 959.8 = 49¢ per hr.
	6	$ 945	NA	Cost/student hour impossible to calculate for H.S. program separately. Costs are for grades 1-12.

Note: Obviously, these averages are highly volatile in that the inclusion or exclusion of a program, given that programs of all sizes are not proportionately represented, can shift the average significantly.

NA = Not Available

TABLE XII.

ANNUAL AVERAGE COST PER DISADVANTAGED STUDENT IN PROGRAM VERSUS AVERAGE ANNUAL COST PER REGULAR DAY SCHOOL STUDENT FOR INTENSIVELY STUDIED SCHOOLS

(Based on current expenditure figures)

Program Category (1)	Program/ Case Number (2)	Annual Average Program Cost Per Disadvantaged Student (3)	Annual Average School Cost Per Regular Day School Student (4)	Difference in Average Cost (5)
Dropouts/ Potential Dropouts (Large Inner-City/ Suburban)	20 25 27 34 35	$ 445 350 588 1,470 1,470	$ 345 1,000 583 1,074 1,074	$ 100 350[1] 56 396 396
Dropouts/ Potential Dropouts (Rural and Small City/ Suburban)	14	$ 325	$ 300	$ 25
Mental and/or Functionally Retarded	4 6 8 11	$ 475 945 600 1,200	$ 330 669 435 700	$ 145 276 165 500
Delinquents	2	$5,000	$2,000	$3,000

[1] The costs of this program are for an after-school program for out-of-school dropouts. Thus, while it is assumed that if these students participated in the regular day school program, it would have cost $1,000 to provide their education. The obvious overlaps that would occur between the day school and after-school programs mean that the extra costs of the out-of-school program as estimated here, are biased upward.

TABLE XIII.

FACTORS ASSOCIATED WITH EFFECTIVE VOCATIONAL PROGRAMS

		Cost	No Cost
1.	Structured programming with built-in flexibility		x
2.	A career ladder within the vocational offerings		x
3.	Teaching techniques that allow students to study and progress at own rate of speed; use of multi-media, self-instructional, and team teaching approaches		x
4.	Maximum academic class size of 20 and small school enrollments	x	
5.	Academic studies integrated with vocational studies		x
6.	Pre-vocational programs which provide opportunity for exploring different occupations	x	
7.	Adequacy of equipment and facilities keyed to actual requirements for entry-level work in the vocational fields	x	
8.	Periodic up-dating of skill offerings, equipment, and teaching materials through consultation with local industry and vocational consultants	x	
9.	Orientation in social skills, self perception, attitudes and world of work		x
10.	Articulation of eleventh and twelfth grades with pre-vocational and post-vocational training		x
11.	Opportunity to earn while learning. Students receive credit for work experience		x
12.	One or two key people who make the program go, who encourage imagination and set the "climate."		x
13.	Maximum vocational class size of 15 without watered down standards	x	
14.	Strong counseling support, use of multi-agency services, extra-curricular activities and system of rewards and incentives	x	
15.	High employment placement record, based upon teacher recommendation and/or special efforts involving use of school personnel to develop jobs		x
16.	Extended school day and/or school year	x	
17.	A mix of disadvantaged with non-disadvantaged; integration of achievers with non-achievers, including the retarded	x	
18.	Non-punitive, systematic achievement measurement program	x	
19.	Involvement of students, parents, and community with schools in order to attract the disadvantaged, and to quickly correct problems		x
20.	Racially integrated faculty in programs with sizable minority enrollment, indigenous teacher aides, and emphasis on indigenous culture of the disadvantaged population		x
21.	Positive and youthful teacher attitudes toward the disadvantaged student combined with previous teaching experience		x
22.	Good teacher-principal relations, with emphasis on supportive role of supervision		x
23.	System of feedback, based on student performance on job, with resulting impact on curriculum	x	
24.	Aim of program is broad behavioral change and growth		x
25.	Treating disadvantaged groups positively as special groups with unique and desirable attributes		x
	Total	10	15

VI. DISCUSSION

A. Vocational Education for the Disadvantaged

As noted in the case studies, the programs singled out for in-depth evaluation in this study were selected more for exemplary features, over a range of effectiveness rather than for overall effectiveness. However, this identification of exemplary features, when compiled for each type of program, describes a composite exemplary program. Where a program is strong in one area, it is weak in several others, thereby reducing the impact and effectiveness of the exemplary features.

At the same time, it is virtually impossible to either chart or compare the features of the programs, because where the features are outstanding in some programs, they are non-existent in others.

For example, a program will have a high job placement rate and a good follow-through program, but have no disadvantaged students; or, another will have a successful out-reach program and high enrollment from among dropouts and the disadvantaged, only to have no satisfactory academic curriculum.

This lack of consistency and uniformity among exemplary programs indicates a lack of understanding or agreement on program objectives and priorities. It is as if each program is operating in a vacuum.

This leads to still another disappointment; specifically, the absence of evaluative data. Schools kept some records of student achievement but most programs kept no records or completely disregarded testing and evaluation.

The most glaring omission of this kind was in the lack of information and records on student characteristics. There seem to be as many definitions of the disadvantaged as there are programs, with many of the schools obviously tailoring definitions to fit the existing enrollment. There is also a lack of agreement among the programs on the goals of vocational education, with varying degrees of emphasis on the work experience aspect. There is little uniformity on the role of general education programs. A few programs effectively integrated academic and vocational subjects, but most emphasized the latter.

Flexibility in programming should be available under all circumstances. However, there is a need to identify and specify factors that should be common to all programs, and priorities that should be pursued at a national as well as a local level. Therefore, it is necessary to clearly define what is meant by such terms as "disadvantaged" and the kind of services that are to be provided.

The first priority should be the definition of the clientele. The word "disadvantaged" as used, falls short of being a useful definition. It raises more questions than it answers; "disadvantaged" in terms of what? "disadvantaged" in comparison to whom?

There are about 11.2 million youth between the ages of 14 and 17. Conservatively, about 10% of these youth can be classified as being "disadvantaged" --that is, they come from low income families. When the definition of disadvantaged is broadened to include the characteristics of the target population studied, this number would easily jump to 30%.

The five populations discussed here should be served in proportion to their numbers. Thus, on a percentage basis, the largest proportion of services would be directed toward serving the needs of the inner-city youth, the next largest would serve rural youth, etc.

In more than one program, the school administrators sidestepped questions about enrollment by stating that all youths enrolled were disadvantaged even though this seemed not to be the case. In short, the broad and unresolved question of who are the disadvantaged, provides an excuse for continuing to fill the classrooms with the "teachables," to avoid a confrontation with more difficult problems.

Once working definitions are set and the needs are defined along functional lines, procedures should be developed for recruitment and selection.

The case studies illustrate that concepts of recruitment are foreign to many programs. As it applies to dropouts, under-achievers, and the unmotivated, recruitment implies outreach. Yet, the most common practice in these programs is to re-define recruitment to mean a referral system. Even when classes are set up for the "worst" students, schools want the best of the worst.

Many examples of "creaming" were found in programs, the most obvious being: screening out behavioral problems, rejecting active delinquent cases, and rejecting those who had been expelled from school.

B. Discussion of Quantitative Indices of Effectiveness

The emphasis in this study has been on obtaining objective, quantifiable data as a means of evaluating vocational programs. This section presents a discussion of achievement, dropout, cost effectiveness, placement, follow-up data and test data. A major assumption is that the success of a program can be assessed by changes in behavior of students, as measured on standardized achievement tests. However valid this assumption may be, it does run headlong into a current issue which may simply, and perhaps tritely, be stated as "to test or not to test."

Testing has become very popular. For example, the Sixth Mental Measurements Yearbook,[28] published in 1965, contains listings for 1,219 tests; 27% more entries than the number appearing in the Fifth Yearbook published in 1959.[29]

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[28] Oscar Buros, (ed.) The Sixth Mental Measurements Yearbook. Gryphon Press, Highland Park, N. J., 1965.

[29] The Fifth Mental Measurements Yearbook, Gryphon Press, Highland Park, N. J., 1965.

In the past several years, the basic premise that tests provide the only fair, unbiased means for assessing individuals, has been seriously questioned. The thesis is the inherent "unfairness" of tests, because of misuse, invasion of privacy, etc.

Most recently, a new issue has been raised in relation to tests; that they are unfair to members of disadvantaged groups because they were developed with a middle class, white population as the norm group. That interest exists is evidenced by the convening of a conference entitled "Testing Human Potential-New Techniques for Selecting Employees from Minority Groups" in April 1968, by the Commission on Human Rights of the City of New York.

What bearing does this discussion have on this study? An evaluation of the behavioral data existing in schools must take into account prevailing attitudes toward testing. It was difficult to distinguish between true feelings and discreet statements by school administrators. Taking this caveat into account, it seems that among school personnel, there are prevailing strong sentiments against testing, per se. There were certain schools which did indicate that their policy was not to administer tests. Nevertheless, the general attitude was one of blind acceptance or indifference.

What, then, may explain the difficulties the study experienced in attempting to collect behavioral information from the schools? Before answering this, let us re-examine some of the results.

Although the following statements are generalizations and do not represent all intensively studied programs, they, nevertheless, attempt to capture the flavor of the findings. In summary:

a. A total of 73% of the programs (29 out of 40), report that some achievement test data is available.

b. A total of 60% of the programs provided student achievement test data for this study; 55% provided I.Q. data. Considerably smaller percentages forwarded grade averages or other behavioral data.

c. A total of 33% of the programs provided some measure of achievement test change; i.e., a pre and a post-test within an intervening period of time.

d. Much of the test score data reported on students had been obtained by the schools prior to or upon entrance into the program. There was very little indication of routine follow-up assessment while attending, or upon completion of the program.

e. The student population in the 40 intensively studied programs had very low average scores on both achievement and I.Q. measures. On the former, it was established that students are some four to five grades behind on reading and arithmetic achievement. The overall average I.Q. of these students is below 90.

f. There is a distinct lack of increase in achievement test scores from pre to post-test.

g. A few of the schools report that they do not and will not administer achievement tests; i.e., they do not believe in testing. The overwhelming majority of programs did cooperate and attempted to administer the test the study used.

What are the implications of these findings? Consider them in terms of a series of questions:

a. Who is being served?

The data suggest that the student population in the intensively studied programs is heterogeneous. There is a considerable range on I.Q. and achievement scores both within and between programs. For example, it was found that some student groups were only about one-half a grade level below, whereas others were as much as four and one-half grades below.

The results of the Stanford Achievement Test clearly place the students four and five grades retarded in both reading and arithmetic achievement. An interesting comparison may be made with data from a Job Corps population. As of December 1965, the Job Corps mean reading achievement level was at the 5.8 grade. For the present population, the mean is 7.2. On arithmetic achievement, the two populations are virtually the same; for the Job Corps, the mean being 6.7 and for the study population, the mean being 6.9.

b. How successfully are they being served?

They are being served very poorly as measured on an achievement index. The students continue to fall further behind the norm for their grade as they progress through school. In fact, there is little change in score grade level from first to second testing, even though actual grade level has increased three to four grades. This finding is in agreement with the "Coleman Report," if we equate the minority group (disadvantaged) population of the Coleman Report with the present study's disadvantaged population. Specifically, Coleman et. al., found that minority groups tend to show an increasingly larger deviation from the average for their grade as their school grade increases.

c. Is vocational education less testing-oriented than is general education?

The answer to this question is yes--particularly in the tenth, eleventh, and twelfth grades.[30]

In summary, vocational education programs use achievement testing as a one shot affair, for referral purposes rather than repeating measurements at intervals.

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[30] O. Brim, D. Goslin, D. Glassand, I. Goldberg; The Use of Standardized Ability Tests in American Secondary Schools and Their Impact on Students, Teachers, and Administrators, Cooperative Research Project No. 2334, Technical Report No. 3 on Social Consequences of Testing; Russel Sage Foundation; University of Pittsburgh; 1964.

d. Why is there a paucity of test data on disadvantaged students in vocational education programs?

There are several explanations for this finding:

(1) A generally negative attitude toward testing.

(2) The schools do not see tests as a useful educational device. In some cases, schools react toward disadvantaged students in the same manner as hospitals do toward terminal cases; that is, information and knowledge will be of little help.

(3) There is a lack of support (funds and personnel) to enable testing programs to be executed. There may be some truth to this. Although testing itself is not prohibitively expensive, it does require an investment in school personnel time, if it is to be utilized correctly and effectively.

(4) The schools are afraid of what test results will imply. Increasingly, critics of education are claiming that the blame for lack of educational achievement rests with the schools and not with the students. Following this analysis, schools might be reluctant to collect test data unless the data will show positive results.

e. Why is there such a distinct lack of increase in achievement test scores from pre to post-testing?

The schools appear to stress the acquisition of skills rather than educational achievement. As a result, this study found very few programs where educational achievement was an objective.

We have reservations about the validity of the dropout data reported by the schools. Inconsistencies observed in the data apparently stem from three sources:

a. Misinterpretation of the questionnaires.

b. The unavailability of hard data due to newness of programs, incomplete follow-up, etc.

c. Many of the schools did not include a dropout figure, thereby decreasing the number of schools that should be included for a representative sample and distorting the total picture.

It must be understood that any attempt to group programs may be a serious loss, because each has developed special characteristics in its attempt to work with a special segment of the student population for its community. Each program should be examined in terms of improved services rendered students over a period of time; improved achievement rates of the students over a period of time; and the dropout rate of this program, compared with the probable dropout rate if the program did not exist.

The dropout rate in one school may be higher or lower than in another because of the presence or absence of one or more of the factors of effectiveness. Although lack of any of the 25 causes for student success may affect the dropout rate, (and high achievement), several seem especially important.

Academic factors: Self-paced systems with time for individual assistance and small class size appear important. Both conditions contribute to the lowering of the dropout rate because of increased student involvement. Programs 12 and 21 emphasize individual pacing. Their dropout rates are about half the average rates of their respective categories. Small academic class size (fewer than 20 students) is reported by nine of the schools. Their average dropout rate is lower than that of their respective categories.

Vocational factors: The vocational factors are perhaps the major contributants to diminishing dropout rates. Students who are able to explore occupations before they receive in-depth skill training, select areas of interest for comprehensive training, earn income while at school, and receive instruction in small classes, feel part of the educational system and the real world. They are more likely to have a focus for their future than students without these vocational alternatives.

Twenty-one of the schools made special note that their programs include at least two of the key vocational factors of effectiveness. About 75% of these schools have dropout averages lower than the average of their respective categories. Thus, the availability of a variety of good vocational courses that are designed for students of varying levels of ability acts as a holding power for a school, and benefits its students.

Supportive services: Schools that boast strong counseling support and high placement records probably retain students to a greater extent than where such services are absent. Students who feel they are being helped in a way that will assist their future will be less likely to reject "the system." Of the 16 schools reporting high placement records and special emphasis on counseling, over 80% have dropout rates below the average of their respective categories.

Administrative factors: In the administrative scheme, a racially integrated faculty and positive teacher attitudes toward disadvantaged students are two factors of effectiveness that probably play a part in lowering dropout rates. It is well documented that many disadvantaged students are Negroes. Negro faculty members serve as models for student behavior and provide students with more realistic impressions of the world. For the white student, too, an integrated faculty represents a more realistic picture of the real world. Obviously, a school with a segregated or near-segregated student body of one race, and a segregated faculty of another race is proof to youngsters that their open society is, in fact, closed.

TABLE XIV

PERFORMANCE INDICES OF PROGRAM BENEFITS FOR SELECTED VOCATIONAL PROGRAMS FOR THE DISADVANTAGED

Index of Benefit							
Program Category (1)	Program/ Case Number (2)	Reading Test 1/ (3)	Arithmetic Test 1/ (4)	Dropout Rate (5)	Grade Level in Months of Achievement 1/ (6)	I. Q. 1/ (7)	Gross Job Placement Ratio 2/ (8)
Dropouts Potential Dropouts (Large Inner City/ Suburban)	25 27 34 35	N.A. -- 6.8 8.7	N.A. -- 5.8 6.3	35% -- N.A. N.A.	-- -- N.A. N.A.	-- -- N.A. N.A.	-- 90/100=90.0% 121/121=100% 56/91=61.5%
Dropouts Potential Dropouts (Rural and Small City Suburban)	14	6.6 Improved to 7.2 4/	--	--	2.9 Improved to 7.5 2/ 7 Improved to 7.1 3/	--	N.A.
Mental and/or Functionally Retarded	4	4.8 Improved to 4.9	4.2 Improved to 4.6	N.A.	N.A.	N.A.	N.A.
	6	N.A.	N.A.	29% Improved to 1%	N.A.	N.A.	N.A.
	8	N.A.	N.A.	23-25% over the last seven years	N.A.	N.A.	80/88=90.9%
	11	2.9 Improved to 4.3	N.A.	N.A.	N.A.	73.4 Improved to 82.3	N.A.
Delinquents	2	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Sources: Case Studies
Notes: N.A. = Not Available

1/ See Chapter V (Results) for the exact description of the tests used in the respective programs.

2/ This ratio is exclusive of those students who went on to pursue post-graduate training; Grade level improvement of 20 sixth grade students.

3/ Grade level improvement of 42 seventh grade students.

4/ California Achievement Test

It is difficult to measure a school's positive attitudes toward its students, though this factor is immediately recognized by students. The role of the faculty in reducing dropout rates was discussed in the case studies.

In summary, the factors of effectiveness may be important for all students, but they are especially important for the disadvantaged whose problems are compounded by social, economic, and emotional conditions.

The cost-effectiveness analysis which can be performed in this study is, as noted, severely limited by shortcomings in the performance indices.

1. There is often no index of any type of benefit.

2. There is no index of benefit which relies upon comparisons between experimental and control groups.

3. The benefit data which exist are of the before-after type.

The lack of data on placement and follow-up was particularly evident. This was due in part to the fact that the average age of programs was less than two years and because measures were taken on the 1967-68 classes. Another important reason why such data do not exist is because schools do not perform such evaluations.[31]

Program 14 enrolls dropouts and potential dropouts from rural and small city suburban areas. Attempts were made in this program to improve the absolute level of grade performance by one grade level year within the period (seven months) the program was in operation. This was not achieved. Rather, 20 sixth-grade students improved their grade level advance from 2.9 months in their sixth grade year to 7.5 months in the 7 months of their program time period. A group of 42 seventh graders improved from 3.7 to 7.1 months grade level achievement over the program period. However, it is misleading to suggest that the program was a failure, though it may not be the best that is possible. The program is effective in that there was a net improvement (in before-after terms) in months of grade level performance. Relative to the regular day-school students, an additional $25 in average current cost per disadvantaged student (an increase of 8.3% or a factor of .083) enabled the grade-level performance of the students to rise by 46 months over their previous performance. This represents an improvement by a factor of 2.59 (7.5 ÷ 2.9). Looking at this program another way, a marginal cost (if marginal equals average) of $325 brought about a 7.5 month gross improvement in grade level performance or a 4.6 month net improvement over the previous year's experience. This net change assumes that in the absence of the program, the sixth graders would have continued to improve at only 2.9 months per school year. To find out whether these relationships are high or low, one would have to compare them with alternative programs to achieve the same type of improvement on the same type of student group.

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[31] For some idea of the elementary level at which evaluation exists in vocational education, see Laure M. Sharp and Rebecca Krasneger, The Use of Follow-Up Studies in the Evaluation of Vocational Education, Bureau of Social Science Research, Inc., Washington, D.C.; May 1966.

The benefits of the 42 seventh graders are not as high, but still respectable, because a seven-month improvement in grade-level achievement occurred in a seven-month period, in contrast to an improvement of half this size for the before-program period. Or, a marginal cost of $325 caused a gross change of 7.1 months in grade level performance or a net change of 3.4 months. For the same marginal cost, the sixth graders improved 1.2 months more than the seventh graders.

Four of the programs deal with the mentally or functionally retarded. Here it is possible to make cost-effectiveness comparisons between two variants of programs which are intended, in part, to raise the level of reading ability. To make this comparison, however, one must assume that the two samples of students are the same in terms of their socio-demographic characteristics and that the programs occurred for the two student groups over the same time period and during the same stage of maturation.

To illustrate, in Program 11 for mentally or functionally retarded children, an expenditure of an extra $3,600 per student over a three-year period contributed to a reading-level improvement of 1.4 years, or a yearly average of .5 years. In contrast, Program 4 expended only an extra $145 per year and noted an improvement in reading level of .8 years. If, within this program framework, there is a strict linear relationship between expenditure and reading level improvement, an extra expenditure of $1,200 (instead of $145) would have resulted in a reading level improvement of .7 years. Then, in terms of reading level improvement, Program 4 is more effective than Program 11.

A final analysis deals with estimating the relative effectiveness of selected programs with respect to their ability to place their program-graduates in jobs.[32/] The job placement data which we have are gross in nature; that is, we have no idea what the net contribution was in achieving the measured placement ratio. No control group exists on which to make comparisons. Thus, the observed placement ratio could have occurred due to a variety of reasons, none of them necessarily related to the program itself, which may have had a negative, minimal, or positive effect on job placement. Using gross placement data for analysis assumes that the entire amount of placement is due exclusively to the program. However, this is not the case.

Four programs exist on which we have both cost data and gross job placement ratios. Program 34 had a placement ratio of 100% for an expenditure of $1,470 per student. Does this mean that Program 34 was a success? In an absolute sense, yes, since a placement ratio of 100% was achieved. However, if enough resources are expended, it is always possible to achieve a perfect placement ratio. The crucial question is, was this the least costly program that could have been devised to achieve the 100% placement ratio? Our study will not answer this question. Nor will gross placement data ever provide such an answer.

But, setting aside these criticisms for a moment, it is possible to make some crude comparisons among the four programs. Any one of the programs can be selected as a base on which to estimate an index of costs. Of course, one

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[32/] See Table X on page 237.

will get a different ranking of programs, depending upon which program is selected as the base. Choosing Program 34 as a base yields indices of cost of 40.0, 100.0 and 40.8 for Programs 27, 35 and 8, respectively.

Index of Gross Placement

Programs	Cost	Ratio
34	100.0	100.0
27	40.0	90.0
35	100.0	61.5
8	40.8	90.9

A comparison of cost indices relative to placement ratios is now possible. From an inspection of the data, it is possible to see that Programs 27 and 8 are to be preferred (if Program 34 is accepted as a base), to Program 35, insofar as placing program graduates in jobs is concerned. Of course, these data say nothing about the quality of the job or the length of time it was held. This information is needed to make any type of complete analysis. However, it is not possible to say whether Program 27 is preferred over Program 34, for while the costs of the former are less, its placement ratio is also less. Nor is it possible to judge between Programs 8 and 27. Program 8 costs more than 27, but it also has a higher placement ratio. Thus, one cannot accurately determine, given this type of data, which of these programs is optimum in cost-effectiveness terms where the performance index of job placement is under consideration.

C. Vocational Training Considerations for the Five Disadvantaged Groups

This section discusses the needs of these groups and the factors of effectiveness in successful vocational programs aimed at meeting these needs.

1. The Problems of Disadvantaged Youth

For the purposes of this study, the problems of disadvantaged youth can be divided into three categories--economic, social, and individual.

The economic category can be broken down into six components: basic education, skill training, productivity, job structure, mobility, displacement, and opportunity or lack of it. All of these components constrain the disadvantaged, and make them (a) dependent on the economic conditions of the country and (b) the traditions and attitudes of employers and Federal, state and local administrators of training and employment.

The social factors relate closely to the constraints imposed by the educational system, although other social attitudes and institutions also contribute to the problem. Cultural bias is prevalent among teachers, in education materials, and is implicit in the operations of the schools. The reluctance of the schools to reach out and meet the problems shows a fear and animosity toward the unknown and the different that are prevalent in other institutions. The refusal to understand cultural differences, combined with efforts to impose social and cultural attitudes that are negative, serves to further polarize youth into behavioral patterns of withdrawal and hostility.

The lack of self-perception in an individual makes it easier to understand such problems as lack of social orientation, lack of pride, and lack of a sense of responsibility. These, in turn, lead to isolation, frustration and anti-social behavior.

The above is an over-simplification of a complex set of circumstances; however, it can be stated almost categorically that any vocational programs aimed at training disadvantaged youth will be severely hindered unless attention is directed to each of these three problem areas and the vocational training needs that presently are unmet.

2. Vocational Training Needs

The conclusion is inescapable: there is a critical need for vocational and related programs for all disadvantaged youth. In relating the size and scope of the problem to what is actually being done in vocational education, it is equally clear that needs are not being met.

Much of the failure of the present system of American education to reach and teach these youth can be attributed to the lack of communication between education and the community. Educational institutions have not only placed themselves in the untenable position of being "the enemy", but may be intensifying the problem they want to solve.

Inner-City/Suburban Youth - The proportion of Negroes in inner-cities has more than doubled in the past 25 years. About 60% of this increase can be accounted for by in-migration from the rural areas, accompanied by out-migration of the white population to the suburbs.

The academic retardation present among these youth is estimated to be between three and five years, dropout rates are in excess of 50%, and about 80% have adjustment problems.

When these youths drop out of school, they become unemployed. Among non-white teenagers in the central cities, the unemployment rate was 45.8% for females and 30.6% for males, and not all are reported.

Unemployment statistics do not tell the whole story. An equally great problem affecting inner-city youth is sub-employment, which is a composite statistic of unemployment, inadequate part-time employment, and earnings below the poverty income level.[33]

The unfortunate conclusion we reached is that the secondary schools are effectively serving only a small percentage of youths in inner-cities.

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[33] There are many excellent reviews on the problems of youth in inner cities. For a good critical review of the literature, the reader is referred to: Low Income Youth in Urban Areas, A Critical Review of the Literature; Bernard Goldstein; Rutgers University; Holt, Rinehart and Winston, Inc.; 1967.

Rural/Small City-Suburban Youth - Statistically, the unmet needs of rural and small town youth are clear. Insofar as we could judge, there were few vocational programs--with the possible exception of vocational agricultural programs--that serve dropouts and potential dropouts.

Five states, selected at random from various parts of the country, present a grim picture.[34] Average dropout rates for Alabama, Arkansas, Iowa, Kansas, and North Dakota are around 20% of total school enrollment. Training opportunities for these dropouts are limited to NYC and MDTA programs, and a mixed bag of placement services. The number of such dropouts receiving training is probably less than 5%.

Certain facts related to rural dropouts should be considered. Approximately 40% of all school children are in rural (farm and non-farm areas). Of these, four million youths are between 15-19 years old. In 1960, between 6% and 15% of all 15 year-old youths were high school dropouts; of these, dropouts were highest among rural non-farm, non-white males and lowest among rural farm white females. At least 60% of the 15 year-old youths not in school had completed only elementary school or less.

The Mentally and Functionally Retarded - It is estimated that about 20% of the school population is retarded and only a small proportion receives the kind of education studied here.

This group appears to be the most difficult for school administrators to serve effectively. This difficulty stems, in part, from an inability to discriminate clearly between biological, psychological, and cultural factors in retardation.[35] It reveals itself in the terms that are used; e.g., "slow learner," "under achiever"--which, while taking some of the stigma from retardation--nevertheless, are not very helpful. At the lower I.Q. ranges (50 and below), there is not a great deal of difficulty in identification. It is in the ranges 50 to 90 that the difficulty arises.

Concern should not be so much with casual factors in retardation as with behavioral indices relevant to the world of work: How much, how fast, and in what setting can a retarded person acquire academic, vocational and social skills and knowledges?

Delinquent Youth - Although approximately 200,000 persons leave federal and state prisons each year, few receive effective training and education in prison. Currently, there are approximately 50,000 youth in training and detention homes for juvenile delinquents. Of these, approximately one-third are female. Most penologists emphasize that the purpose of imprisonment should be rehabilitation rather than punishment, and that training and education are important instruments for rehabilitation. Our society, however, has not provided the facilities and personnel needed to develop the work skills of prisoners.

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[34] State reports, On Profile of Youth - 1966, Legislative Reference Service, Library of Congress, Part 2, August 1966.

[35] R. L. Masland, S. B. Sarason, and T. Gladwin, Mental Subnormality-Biological, Psychological, and Cultural Factors, Basic Booths, New York, 1958.

Lack of education and low vocational skills are significant factors in the high recidivism rate. At least one-third of all releasees from federal and state correctional institutions are re-entered.[36] The primary barrier to employment is often not a criminal record, but a lack of work experience and vocational skills. Our society, however, has not provided the facilities and personnel needed to correct this situation.

Non-English Speaking Minorities - There is no question that more and better vocational programs are needed to serve non-English speaking students (American Indian, Spanish- speaking), Eskimo, and Puerto Rican). Possibly, most significant is the absence of usable information describing programs for these youth.

American Indians - American Indians on reservations rarely receive high school level vocational training. Programs under the Vocational Education Act for Indians tend to dump Indians into city ghettos where inexpensive housing and a lower-class social and educational setting is somehow deemed necessary and more comfortable for them. In the cities, they may be job-trained, and in effect, paid to leave their reservations.[37]

Of approximately 600,000 American Indians, about 400,000 live on reservations and are under the guidance and control of the Bureau of Indian Affairs. The BIA reports that about 50% of the Indians in America are under 18 years old. The Indian youth who represent the majority of the total Indian population should be trained for employment while in high school; this is the only way they will receive a useful and complete education.

Eskimos - The BIA and the State of Alaska provide education for equal numbers of native children in Alaska. In 1960, only 34% of the eligible children were enrolled in secondary schools. Only 30% of these are likely to graduate from high school.[38] It is typical that only 10 out of 100 who enter first grade will graduate from high school.

Spanish-Speaking - The Spanish-speaking American of the Southwest represents 12% of the population of California, Colorado, Arizona, New Mexico, and Texas, (over 4,000,000 in 1966). There is almost no attempt to provide effective vocational training for the high school population of this group.

Vocational programs are minimal. Schools alienate the youngsters by ignoring the cultural background of the children. A kind of bi-culturalism is needed to reach the people, who are suspect of "Anglo" habits, and who scorn what is not "honest labor" (physical labor such as agriculture).[39]

Carefully devised high school vocational programs that consider the attitudes and ethnic pride of the Spanish-speaking Americans help to alleviate the following conditions:

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[36] Excerpted from Manpower Research Bulletin, April 6, 1966, Manpower Administration, U. S. Department of Labor.

[37] Stan Steiner, *The New Indian*, Harper & Row, 1968, p. 181.

[38] *The Village People*, Anchorage Daily News, 1966, p. 23, Anchorage, Alaska.

[39] Robert Hayden "Spanish American of the Southwest," *Welfare in Review*, April 1966, p. 15.

1. Over 40% of the employed males earn less than $3,000 annually.
2. Proportionately, there are one-fourth to one-half as many Spanish-Speaking high school graduates as Anglo.

Puerto Ricans - The Puerto Rico Department of Labor estimates that there are 100,000 youngsters in the 16-21 age group who are not attending school and who are either unemployed or holding menial jobs.[40] One school is attempting to reach some of these children. The Centro des Opportunidades Educativas enrolls 606 students, with an additional 70 students from the Neighborhood Youth Corps. This does not approach the 100,000 who should receive effective vocational training in high school before they become a part of the "unteachables" in the United States.

About 400,000 Puerto Rican youngsters are in schools in the United States, with about 245,000 in New York City. Puerto Rican leaders from ten states reviewed the facts of the education of these youngsters:

1. Dropping out begins before high school for Puerto Rican children.
2. Various "programs" of acculturation and remedial education have had little effect.
3. Only 5% of the students go to college (compared to about 50% of the rest of the population).
4. Teachers call the slum school children "unteachable" and do not provide as much instruction as discipline.
5. School has been a failure for thousands of Puerto Rican children.[41]

Summary - There are very few programs attempting to provide effective education and training to non-English speaking secondary school children. The few who may continue in post-high school programs find themselves in classes thay may:

1. Teach English.
2. Teach basic education or provide remedial instruction.
3. Teach a desired or an undesired skill.
4. "Acculturate" a student and remove him from his own people.

In other words, little is being done to reach the majority of the non-English speaking youngsters in a way that will help them to adapt to the general community, prepare for employment, and retain their identity.

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[40] Ronald Walker, "In Puerto Rico, A School for Dropouts Only," American Education, June 1966, p. 18.

[41] Reported in the Christian Science Monitor; May 1968.

VII. IMPLICATIONS OF THIS STUDY

A. The Setting

The basic goal of American education (however achieved) is the development of the individual to the limits of his capacity. Within this broad framework, it is necessary to distinguish how vocational and general education differ and the purpose of vocational education for the disadvantaged. There are several issues:

1. Vocational education needs to be geared to more than one intellectual level, with brighter students being challenged more than at present by an in-depth exploration of industrial processes, and/or human service principles or assumptions within an occupation.

2. The availability of jobs is not the only criteria for determining what will be taught. If vocational education is to avoid the accusation that it is subsidizing certain industries while ignoring others, it must train for jobs with the following characteristics:

    a. There are significant numbers of workers who are already employed in this specialty and the number is growing.

    b. There is a built-in ladder of progression from the entry-level job.

    c. Wherever practical, the training offered will include related skills rather than only the duties of one particular D.O.T. job title.

3. Because education must, insofar as possible, focus on the whole person, it also follows that vocational education must develop the student socially and intellectually, as well as in skill development. There are many special needs and reasons for this in terms of disadvantaged students and manpower implications, as well as the deficiency in intellectual skills that characterize many of the disadvantaged, and the fact that manpower changes in the future will place a premium on the educated person.

4. Vocational education can be thought of as existing in two major branches: pre-vocational and vocational skill training. They should complement each other.

    a. Pre-vocational education should start with the particular and work back toward basic principles (discovery method).

    b. Vocational training should start with the underlying principle, and work forward toward skills.

5. Since modern science teaching involves the use of laboratories which are similar to vocational training workshops in that both rely on sensory experience and both result in a product being produced, it makes good sense to combine the two when possible. Such a blend would be easier to achieve at the elementary level and somewhat more difficult in the junior high school. Nevertheless, this applied science approach, which was first publicized by the MIT Summer Study, offers the most promising approach for interjecting a pre-vocational orientation into the regular curriculum in the lower grades especially for the disadvantaged.

6. Vocational education, as distinct from pre-vocational (which does not require any commitment on the part of the student), should likewise be re-defined so as to encompass a broader perspective than is presently the case. Accordingly, we have identified the area of life skills education as including:

   a. Setting: this combines economic geography with the sociology of occupations. At the simplest level, it begins with typical products and identifies their point of origin. It also discusses points of occupational entry.

   b. Processes: this is a continuation of the Applied Science approach at the senior high school level, with the emphasis on why certain processes are used. By introducing intellectual content into skill training, a challenge is provided to brighter students.

c. c. Goals: this aspect of vocational guidance has been separated from information-giving, because it involves individual diagnosis (aptitude testing, for example), career planning, and placement, all of which are tailored services requiring a one-to-one relationship with the student. Information-giving on the other hand, otherwise called "group counseling," really belongs in the first category (setting).

   d. Proficiency: when the student has identified a goal, he is generally desirous of moving toward that goal as swiftly as possible. Consequently, the exposure to skill training should be based on the project approach, with the sequence being in an increasing order of difficulty, so that the student is aware of progress and what remains to be mastered. There is a question in the minds of educators as to whether the cost of achieving true proficiency is worth the effort, since employers do not always accept the school's statement that the individual has fully mastered his trade and may insist on starting all newcomers at the same level. We believe the use of this term is justified when the effort is being made to achieve some degree of accuracy and speed in a particular area.

7. But vocational education has tremendous potential for exciting youth not interested in intellectual matters as such. and these ideas suggest how this might be done. Vocational education can and should be thought of as a vehicle for holding the interest and motivation of youth, as well as provide training for jobs.

We feel that exemplary programs can be constructed which meet these issues and provide quality education for the disadvantaged.

B. The Manpower Challenge

About 3 million new workers are added to the labor force each year. At the present rate, about 500,000 of these 3 million are college graduates, 1.3 million high school graduates, 600,000 elementary and secondary school dropouts and the remainder are housewives, discharged servicemen, etc.

By 1975, the composition of the working labor force will be changed considerably. While farm employment will drop by 19%, employment in government and services will increase 25%. Jobs in transportation and the utilities will expand, but jobs in the production of tangible goods will decline to 32% of all non-farm payroll jobs.

In quantitative terms, the greatest increased demand for manpower will come from the professional and personal services field. This includes policemen, educational services, hospital workers, appliance servicemen, cooks and waiters, etc. In the white-collar area, the greatest demand will be for teachers, clerical workers, nurses, chemists, scientists and engineers (not including draftsmen).

Placed in this context, the results of this study have broad implications for vocational education/work experience programming for disadvantaged and minorities, schools, training institutions, business and industry, administrative agencies, and legislative bodies.

The most basic implication is this: We are now five years beyond the passage of the Vocational Education Act of 1963. Though it is not realistic to expect American education to be tooled up in the few years that it has had, this observation is warranted: There are more projects in this study that are similar to Case Number 4, than to Case Number 7 and Case Number 15, and there are very few programs underway that serve more than a fraction of the population.

C. The Curriculum and the Teacher

Many of the programs we studied are caught up in traditional practices. For example, many could not grant a diploma because the school system required the successful completion of certain academic courses. Yet, hopefully, a few years later in a Job Corps camp, MDTA program, etc., many of these students (who will leave the programs studied here) will receive a GED certificate. In other cases, programs excluded the most seriously disadvantaged. And as noted above, very few of the programs revised here attempted to teach anything but the most mundane skills.

Aside from administrative practices and regulations, of which much more could be said, much has also been written about the learning styles of the poor. The Coleman Report seems to have identified a major variable of poor achievement, namely the attitudes of the teachers themselves:

> It appears that variations in the facilities and curriculums of the school account for relatively little variation in pupil achievement, insofar as this is measured by standard tests. (On the other hand), the quality of teachers shows a stronger relationship to pupil achievement (and) is progressively greater at the higher grades, (thus) indicating a cumulative impact on the pupil's achievement.[42/]

A study of returned high school dropouts by Pennsylvania State University found:

> (While) it is true that most public school teachers, both vocational and avocational, came from the same type of family background, the difference in their attitudes appears to be related to the type of preparation they received. The broad training which the college teacher receives tends, in many cases, to counteract the effects of their background.
>
> State regulations require that the skilled trades be taught by journeymen and that the teachers of all vocational areas have some actual work experience . . .college credits cannot insure that those who have acquired them hold scientifically valid conceptions of human nature. But they can insure exposure to some of the modern thinking in psychology, sociology and education. If a teacher wishes to hold another view of human nature after such exposure, that is his choice. But the choice should be made with the knowledge that an alternative explanation is available.
>
> The vocational teacher, particularly in the trade and industrial programs, who has not had the benefit of a broad preparation, enters the classroom with his class prejudices intact.

What are some of these prejudices? The report goes on to describe the attitudes of many vocational educators:

> They came from socio-economic backgrounds where there was strong emphasis on upward occupational mobility. Families with this orientation stress the importance of hard work, conscientiousness, fulfilling responsibilities, postponing immediate gratification, planning for the future, etc. People who have internalized these values find the behavior of those from different backgrounds very irritating.[43/]

The conclusion is that a re-education of teachers is needed, and there are two points of view as to how this will be accomplished. One states that vocational teachers need more training in the behavioral sciences. The other (the viewpoint we share) is expressed best by Elizabeth Gilkeson of Bank Street College, who states that proper teacher attitudes can be instilled so

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42/ Equality of Educational Opportunity; Op. cit.; page 22.

43/ Jacob J. Kaufman and Morgan V. Lewis, The School Environment and its Influence on Educational Programs for High School Dropouts, The Pennsylvania State University, January, 1968, pp. 167-68.

that "teachers (can) be educated to recognize their own teaching styles and children's learning styles and then develop ways of making the two styles fit."[44] A number of suggestions have been put forth for accomplishing this, from using a form of sensitivity training to closely supervised teaching practicums.

The recent discoveries in sensory perception of handicapped children suggest that we may be overlooking individual functional differences that can affect how we organize learning experiences. For example, the readiness to learn may be conditioned by an individual's functional capacity to discriminate between things seen, heard, tasted, and felt. Moreover, habit patterns which have been developed to compensate for deficiencies in one sensory area may result in another sensory function becoming dominant. All teachers, including vocational instructors, need to be aware of these effects, since such children usually have normal intelligence and can be taught to perform at an acceptable level.

D. Bringing About Change

Little is known about the receptivity of institutions to change. One study came to the reasonable conclusion that "a community that is slow to adopt one innovation tends to be slow to adopt others".[45] A second finding was related to "the level of public understanding of what schools can do, and citizens' feeling of the need for education," which factors usually were present where a favorable climate for change existed.

This study also examined the pace of change and found that going slow can be just as damaging to reform as going too fast. The Council found that the speed of diffusion was directly related to the degree to which the overall design was perceived. Failure to link the innovative to an overall concept usually meant that it became the first victim of an economy drive.

New York State undertook a study to determine how new ideas could be encouraged and to explore procedures for wider dissemination of proven innovations. It found that:

> "A school, like any other institution, tends to continue doing what it was established to do, holding itself relatively stable and resisting attempts at restructuring. There is a sound reason for this: stability in the institutional structure makes for maximum output of the results that structure was designed to produce. Any change in the arrangement of the elements tends to cut down production, at least until new habit patterns are formed."[46]

Brickell goes on to observe that anything artificial or unreal surrounding an observed program is used as evidence that "it wouldn't work in our school. . .most administrators and teachers believe that the bulk of innovations which come to our attention are without substance, quite possibly concocted by the sponsoring school in an effort to gain outside recognition." Professor Seymor Sarasen of Yale goes even further in asserting that the half-life of a new idea in the public schools is approximately six weeks.

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[45] Paul R. Mont, W. S. Vinclent, and C. A. Newell, The Growing Edge, Metropolitan School Study Council, 1945 (reissued, 1953).

[46] Henry M. Brickell, "State Organization for Educational Change: A Case Study and A Proposal" in Innovation in Education, Edited by Mathew B. Miles, Columbia University, 1964.

The conclusions Brickell draws are that we need to divide the process of change into stages and devise the best strategy for each phase. For example, he identifies the following stages:

1. Basic Research
2. Program Design
3. Testing the model (evaluation)
4. Dissemination (field trials under typical local conditions)

He sees the states or the federal government being involved in the first three stages, but believes that local schools should run the fourth stage. For this purpose, he recommends this be administered by a consortium of adjacent school districts which have actually been established in several states.

A study founded by the Senate Sub-Committee on Education of the administration of Title III of the Elementary and Secondary Education Act found that there were six main thrusts of the "school reform movement": content revision, educational technology, equal opportunity, individualized instruction, organizational flexibility, and teacher renewal. Its major conclusion was that federal programs tended to parallel existing weaknesses in American education rather than helping to overcome those weaknesses.47/ Consequently, there had been only modest gains in these six areas.

The other point is that the report was quite critical of the apparent lack of concern for how innovation becomes firmly established in the schools:

> "The country is replete with examples of innovations that failed because supporting structures were just not available. The language laboratory is our current white elephant; educational television is another example. Schools must be helped to adopt, adapt, and integrate innovation at least until it has become non-innovations, i.e., until it has become such an accepted and valued part of the school's operation that it is maintained under any circumstances."48/

It concludes by urging that priority be given to effective dissemination of educational innovation.

Robert B. Howsam, Dean of the College of Education of the University of Houston notes that:

47/ Notes and Working Papers Concerning the Administration of Programs Authorized Under Title III of Public Law 89-10, 90th Congress, Sub-Committee on Education, April 1967, p. 35.

48/ *Ibid.*; p. 320.

> "A number of observers have pointed out that the impetus for change in education customarily comes from outside established educational institutions. The activities of both the federal government and several large foundations seem to be based on this assumption. . .though there is indication of substantial innovative effort in response to outside intervention, there is little to indicate that the interventions are basic in nature or that they can survive withdrawal of the support."49/

The Vocational Education Act of 1963, made possible the introduction of several new "change agents" for vocational education and the strengthening of existing agents. Some important ones are: research programs in the U.S. Office of Education, the Research Coordinating Unit in Vocational Education established by the Division of Comprehensive and Vocational Education Research in 44 states, the ERIC Center for Vocational Education, the Educational Laboratory Programs, etc.

These "change agents" fall into two classes: those that bring about the changes such as the research programs and those that disseminate change. As reported in this study, both groups are less effective than they should be. There needs to be a direct and sustained emphasis on bringing about change in vocational programs for the disadvantaged. The Research Coordinating Units (RCU's) and the Division of Comprehensive and Vocational Education in the Office of Education were both beyond the purview of this study, but the RCU's for example, were involved in only minimal ways in their states with programs for the disadvantaged.

E. Testing and Assessment

The pattern of testing in most of the programs reviewed here is as follows: when the student enrolled in the program (we studied) he came with an assessment package of sorts. More often than not, this included some judgment of behavior and achievement. This ranged from verification of pregnancy or delinquency, to IQ scores, or six to eight-month-old achievement scores. This is a major characteristic in the overall testing and assessment of these students--the behavior that got them into the program was vertified.

The second pattern was that more often than not students are not tested again. This brings us to our concept of the "terminal case." In the hospital or prison, a terminal case is the patient expected to die or the prisoner expected to spend the rest of his life in prison. They receive minimum care and treatment and no rehabilitation. As a result, it becomes impossible to make anything more than a cursory judgment about these students and the effects of the programs on them.

Testing and assessment for the disadvantaged ought to be part of the reporting system and should follow simple guidelines.50/

49/ Robert B. Howsam, "Effecting Needed Changes in Education" in Designing Education for the Future, Volume 3, Planning and Effecting Needed Changes in Education, edited by E. L. Morphet & C. O. Ryan Citation Press, 1967, p. 75.

50/ For a discussion of goal guidelines see Jesse Gordon, Testing, Counseling and Supportive Services for Disadvantaged Youth. Mimeograph. University of Michigan.

F. A Feedback System: Follow-Up Studies

Education is properly viewed as a long-term investment in human capital. Its effectiveness cannot be totally determined until the process has been completed and the individual becomes part of the labor force.

At present, the needed data is not being systematically collected and retained. The reason is a combination of lack of interest, funds, personnel, and techniques.

In addition to determining what information would be useful, it is essential to find a way of locating former students and eliciting a response. There are three basic techniques for doing this: (a) interviewing graduates; (b) mailing questionnaires to them; and (c) retrieval of information from OASI and the Bureau of Internal Revenue.

The most effective technique is personal interviewing, but costs are prohibitive for many school districts. An interviewing program might be feasible in a small community where it would be relatively easy for a vocational teacher to keep in touch with most of the students he has had for the past several years.

A mail questionnaire to be effective--to elicit a non-biased response--must be carefully designed and administered. Most such efforts do not produce desired results. For example, one school sent out a simple post card questionnaire requesting basic information concerning the nature and status of an individual's employment. The response was 5%. On the other hand, the Oakland School District, in a three-year follow-up study of nearly 3,500 graduates of the 1965 class, elicited a response in excess of 90%. Several factors have contributed to the success of the Oakland approach:

1. The Oakland School District established a Department of Counseling and Occupational Information which has devoted a considerable portion of its efforts to collecting and evaluating information on the Class of 1965.

2. Students were told before graduation that a survey would be made, what its purpose was, and that they would be contacted.

3. The questionnaires sent out requested not only quantitative information, but also extensive information on attitudes. The ex-students surveyed were encouraged to give their opinions and criticisms of the education they had received.

4. Despite the size of the study population, the survey was made as personal as possible. Each letter had a personal salutation. Follow-up phone calls were made to students who had failed to respond with the interviewer inserting a few chatty remarks to put the conversation on a personal, interesting note.

5. The counseling office is always available to those graduates who need assistance in finding a job.

In the development of effective techniques for collecting data, national guidelines are needed to standardize categories of information.

G. Cost-Effectiveness Analysis

A great deal of data is available, but little of it is useful for cost-effectiveness analysis. Data was:

1. nonexistent, or
2. collected on the basis of gross program performance, or
3. collected on a before-after basis.

This data was not in a form to permit the statistical estimations of total cost functions from which marginal program costs could be estimated. Thus, reliance had to be put on the unsatisfactory assumption that marginal costs were equal to average costs.

Next, data did not exist for a sufficient number of programs. With small numbers of programs, estimated average and marginal costs become sensitive to the addition or deletion of any given program.

Finally, from a benefit standpoint, benefit data must be collected using both experimental and control groups. In short, with gross placement ratios, or any type of gross performance data, one has no basis for ascertaining to what extent the level of performance is due to the program and to what extent it is due to interviewing variables.

Thus, individual participant data on socio-economic levels, as well as performance characteristics must be collected for control and experimental groups and multiple regression analysis must be used to determine the net effect of the program in question.

Given these criticisms and suggestions, the conclusions we can draw from the study data are limited:

1. We could not evaluate the various programs in cost-effectiveness terms in a way that the analysis will bear up under criticism.
2. It was not possible to determine, in any orderly fashion, the relative rank of any of the programs in effectiveness terms.
3. The cost-effectiveness analysis, however, is illustrative of what the technique can do, given the data.
4. While program costs differed, it was not possible to ascertain the exact reasons why they differed. Thus, cost comparisons among the programs are risky.
5. In view of point (4) above, it is not possible to rank the programs as more or less costly since, in cost-effectiveness terms, comparisons of costs in the absence of relative program benefits has no meaning.

6. Capital costs were not collected, but since most of these costs are joint in nature, their exclusion would have little effect on marginal cost measures, in any case.

7. Unless both costs and benefits are collected on a given program, it will be of no avail to collect either alone. Little meaningful analysis can be performed on either in isolation.

8. Placement data must be collected in net and not gross terms. Experimental and control groups must be used. Follow-ups over a period of time must be performed and estimates of before and after-tax wage rates or earnings must be collected.

9. Handbook II: Financial Accounting for State and Local School Systems must be revised so that the costs therein reported reflect economic and not financial, accounting, or administrative concepts. Pro-ration of joint costs, for instance, should not be done. However, joint costs and the categories of output for which they are joint should be identified. As another example, Fixed Costs therein categorized are really variable costs mostly specific in nature and should be allocated to their specific categories such as administration or instruction.

10. Efforts should be made to identify non-cost items as they are defined in this study. The specific way in which these items affect educational output or performance should be spelled out.

H. Business and Industry

There are two implications here for business and industry. One is direct involvement in the educational process, the other is indirect involvement through influence on and participation in vocational and job related programming.

With the advent of the War On Poverty, business became involved in education as a "business," unrelated to filling the manpower needs of the contracting companies. The most notable example has been the Job Corps program in which it was found that business organizations could be successful in providing basic academic, remedial, and skilled training to hard-core, deprived youths.

The other stake of business in education, particularly in vocational education, is explicit in "The Manpower Challenge of the 70's;" the fiscal necessity for maintaining a high employment economy; the need for additional skilled manpower as a result of anticipated growth; the desirability of obtaining as much job-ready manpower as possible; and reducing the high cost of on-the-job training.

This study indicated that, where it was sought, business and industry cooperation was effective. In most cases, there was some indication of a correlation between quality and placements. The notable exceptions were in the rural programs where more jobs simply were not available, in the exclusively pre-vocational programs, and in the work-study programs such as Case Number 5.

Perhaps the most fruitful direction to go in involving business (outside of direct operation), is toward programs such as Case Number 3.

APPENDIX A

A SUMMARY OF MAJOR POINTS IN DEVELOPING PROGRAMS FOR PERSONS WITH SPECIAL NEEDS

APPENDIX A 1/

A SUMMARY OF MAJOR POINTS IN DEVELOPING PROGRAMS FOR PERSONS WITH SPECIAL NEEDS

1. The range of ability, intelligence, creativity and potential among the youth and adults who are academically, socio-economically or otherwise handicapped can be compared favorably with those who are considered able to take advantage and benefit from the regular vocational programs.

2. Vocational education, in cooperation with all educational disciplines, must make available the supplemental education required to bring these students to the level of achievement required where they can benefit from the occupational course offerings. Concern for and attention to the needs and desires of each student will produce results affecting motivation and achievement.

3. Course offerings must meet the demands of employment opportunities. The variety of occupational curriculums should be wide enough to encourage the broadest range of interests and abilities. They should be designed and scheduled for persons of varying educational backgrounds, interests, and aptitudes at locations and within time sequences which are mutually convenient.

4. An atmosphere should be created wherein parents recognize that participation in the career planning of their children is essential to the success of whatever efforts are expanded. Creating the climate of acceptance and partnership between the family and the school is extremely difficult, yet most rewarding. The value of vocational education, both for their children and for themselves, can be best expressed when the parents are encouraged to avail themselves of courses which the vocational educators set up to meet their needs.

5. The total community must be involved in the education and occupational training programs along with the vocational educators. Job opportunities, personnel, equipment, training experiences, advisory committees, support for school funds, social services, medical and welfare personnel, and the student body to be reached make up the total program for making vocational education a service to all people of all ages in all communities.

6. To assure adequate supervision, each State should consider assigning a supervisor of programs for the disadvantaged on a full-time basis as its initial move in programming for the handicapped.

1/ The material in this appendix is reproduced from Progress Report of Vocational-Technical Education Program Development for Persons with Special Needs by States; U. S. Department of Health, Education, and Welfare, Office of Education, Program Planning and Development Branch; February 6, 1968; page 205.

Characteristics of Persons with Special Needs

Persons with special needs are those who have academic, socio-economic, or other handicaps that prevent them from succeeding in the regular vocational education program. They include those youth and adults who themselves have one or more of the following characteristics or who live in communities or come from families where there preponderance of these characteristics:

- low income
- poor educational background and preparation
- poor health and nutrition
- semi-skilled or unskilled family heads
- excessive unemployment
- discriminated against or have difficulty in assimilating into the majority culture
- isolated from cultural, educational and/or employment opportunities
- emotional and psychological problems which are not serious enough to require constant attention or institutionalization
- lack motivation for obtaining an education or acquiring a job skill due to a combination of environmental and historical factors
- dependent on social services to meet their basic needs
- lack the political power or community cohesiveness to articulate and effectuate their needs
- have physical disabilities or mental retardation

For purposes of this program activity, those persons are not included among the groups vocational education should be serving who are so physically handicapped or mentally retarded that they require intensive diagnostic and corrective attention from the medical, psychological or psychiatric professions and cannot benefit from occupational education.

PROVISIONS OF THE VOCATIONAL EDUCATION ACT OF 1963
RELATING TO PERSONS WITH SPECIAL NEEDS

Section 1 - Declaration of Purpose

> ". . . to maintain, extend, and improve existing programs of vocational education, to develop new programs of vocational education . . . so that persons of all ages in all communities of the State . . . will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training."

Section 4(a) - A State may use its allotment in accordance with its approved plan for any or all of the following purposes:

(4) "Vocational education for persons who have academic, socio-economic, or other handicaps that prevent them from succeeding in the regular vocational education program."

(5) "Construction of area vocational education school facilities." (The construction of area schools will permit a greater variety of specialized courses to be offered in one institution, better facilities and equipment, and better teachers.)

(6) "Ancillary services and activities to assure quality in all vocational education programs, such as teacher training and supervision, program evaluation, special demonstration and experimental programs, development of instructional materials, and State administration and leadership, including periodic evaluation of State and local vocational education programs and services in light of information regarding current and projected manpower needs and job opportunities."

Section 4(c) - 10% of the sums appropriated shall be used by the Commissioner to make grants to colleges and universities, other public or nonprofit private agencies and institutions, to State Boards and local educational agencies to pay part of the cost of research and training programs and of experimental, developmental, or pilot programs developed and designed "to meet the special vocational education needs of youth, particularly youths in economically depressed communities who have academic, socio-economic, or other handicaps that prevent them from succeeding in the regular vocational education programs."

Section 13. Work-Study Programs for Vocational Education Students

Funds can be allotted to students between 15 and 21 years of age who are regularly enrolled in vocational high schools to compensate them for work for public agencies if they are having financial difficulty in remaining in school. They may earn up to $350 in any academic year, or up to $500 if they are not within reasonable commuting distance to the school.

Section 14. Residential Vocational Education Schools

Demonstration funds may be granted for the construction, equipment and operation of residential schools to provide vocational education for youth between 15 and 21 years of age who need full-time study on a residential basis to benefit fully from such education. Special consideration is to be given to the needs of large urban areas having substantial numbers of youth who have dropped out or are unemployed.

APPENDIX B

PROJECT OBJECTIVES

PROJECT OBJECTIVES

Five broad objectives guided this study. They are:

1. To quantitatively, through the use of standardized testing instruments, evaluate the impact that effective vocational programs have on disadvantaged students in terms of:
    a. educational achievement in general education subjects.
    b. educational achievement in reading and mathematics.
    c. changes in intelligence and/or general aptitude test scores.
2. To evaluate the impact that effective vocational programs for disadvantaged students have on job and school placement following completion of training.
3. To identify, measure, compare, and evaluate behavioral changes that occur in effective vocational educational programs in such areas as:
    a. attendance.
    b. changes in social and personal disorganization such as truancy, delinquency, and pregnancy.
    c. school retention rates.
    d. return and retention of dropouts.
    e. student use of supporting services.
4. To identify, describe, and measure the effective programs, using a case study approach. Factors such as the following will be considered:
    a. systems and standards or criteria for defining effective programs. Specifically, four major criterion categories are considered:
        (1) Whether a program accepts the disadvantaged and, in fact is successful in attracting students.
        (2) Whether a program reduces the dropout rate.
        (3) Whether a program increases skill and knowledge in basic education subjects (reading and arithmetic) using vocational education as the vehicle whereby this is accomplished.
        (4) Whether graduates from a program are successful in getting and retaining training-related employment.

   b. identification of components that make for effectiveness in each program.

   c. evaluation of programs, specifically in terms of the groups for which they were designed.

   d. intra-program comparisons as to the nature and extent of their effectiveness.

   e. inter-program comparisons as to the nature and extent of their effectiveness.

   f. comparison of effective programs with nationwide norms.

   g. evaluation of the appropriateness of disseminating findings from effective programs to others.

   h. cost-effectiveness analyses of programs.

5. To consider the implications of the findings, both on individuals and programs, for the field of vocational education in terms of:

   a. identification of the ingredients of effective vocational education programs for the disadvantaged.

   b. development of more effective programs, i.e., means for increasing the effectiveness of vocational schools in focusing on the special problems and needs of the disadvantaged. A section of this analysis concerns the identification of hazards or obstacles to effective vocational education programs.

   c. costs involved in developing effective programs.

   d. dissemination of information concerning effective programs.

   e. critique of reporting and evaluation procedures.

   f. suggestions for future research.

APPENDIX C

A SUGGESTED FRAMEWORK FOR COST-EFFECTIVENESS ANALYSIS OF EDUCATIONAL ALTERNATIVES FOR THE DISADVANTAGED

A SUGGESTED FRAMEWORK FOR COST-EFFECTIVENESS ANALYSIS OF EDUCATIONAL ALTERNATIVES FOR THE DISADVANTAGED

A. An Overview

What does cost-effectiveness analysis have to offer in the are of educational decision-making for the disadvantaged? It offers a frame of reference designed to systematically investigate the competing claims of alternative means of achieving the same objective. Where alternatives for improving the educational performance of the disadvantaged do not exist, cost-effectiveness analysis is not relevant.

This type of cost-effectiveness analysis has three major characteristics. First, it is quantitative. Costs and benefits can be expressed in either monetary or non-monetary terms. But in the discussion presented below, no monetary benefits will be considered. Second, this analysis must be directly related to the objectives being served by any given set of alternative programs. Thus, the proper definition of the objective or objectives being served is critical to the analysis. Ill-conceived specification of objectives as well as ill-conceived choice and construction of indices to measure the attainment of these objectives will result in a failure of the analysis to provide information in making choices among competing alternatives. Finally, this analysis links costs with benefits.

Treatment of either costs or benefits in isolation of the other cannot provide information in making choices. Costs and benefits of the entire program, however its limits are defined, must be considered in conjunction for any evaluation of alternative programs or actions. The net effectiveness of any program is due to the joint effect of costs and benefits as these have their impacts over time.

These steps, then, must be followed in order to undertake an evaluation and comparison of alternative programs designed to aid the disadvantaged:

1. Objectives of the program or competing set of programs must be specified.
2. Processes or activities to implement the program objectives must be developed.
3. An index or indices of performance of the activities which are intended to measure program effectiveness must be specified.
4. An educational production function must be specified by which the educational output of any given program can be related to a set of related educational inputs.
5. A cost function based on the educational production function given for each activity must be specified.
6. A comparison between benefits (performance indices) and costs must be performed.

These points will be considered in turn:

1. Program Objectives: Specification of program objectives is critical to any comparative analysis of vocational education programs to aid the disadvantaged. For instance, the objectives of this type of education can be ones of:

    a. Improvement of educational performance per se.
    b. Development of life styles and value systems.
    c. Socialization or development of socially effective behavior.
    d. Efficiency or increasing economic output.
    e. Equity or income redistribution.
    f. Pure consumption or enjoyment of education for its own sake.

    This study concentrates on indices to measure the first, second, and third objectives.

    However, these objectives are much too broad as stated to be directly amenable to analysis and must be broken down, if possible, into empirically manageable components. For instance, the goal of improving educational performance should be specified as to the nature of the improvement, e.g., an increase in reading level or in measured I.Q., and the amount of improvement desired as well as the groups which are potentially to be benefited.

    Thus, educational performance must be defined in terms of its components, which themselves must be made much more specific so that they can be measured. Therefore, improved educational performance is one of the elements contributing to social or private well-being; educational performance must be expressed in terms of some measurable quantity. For a given vocational program for the disadvantaged, educational performance is maximized by minimizing cost (monetary and non-monetary) subject to some specified level of gain or by maximizing some particular benefit subject to some specified level of cost.

    If a program produces educational achievement, it has accomplished the first step in seeking an optimum level of educational performance if it has maximized the net addition to grade level relative to cost. Yet, once this is done, only one aspect of well-being for the disadvantaged has been optimized and the single-minded pursuit of this objective may result in a reduction in additional benefits to be achieved from other objectives on which the total well-being of the disadvantaged student depends. The interrelationships of these objectives must be borne in mind.

A major point to bear in mind is that cost-effectiveness analysis of education is always partial in scope and, indeed, the analysis of any given educational activity or program must be partial in scope. This limitation of cost-effectiveness analysis must be stressed. For instance, one must not lose sight of the fact that maximizing the net improvement in grade level performance of a disadvantaged youth participating in a vocational program is not the same thing as maximizing the overall well-being of the student or to society which results from the vocational program. And, also, it must be stressed that maximizing the net improvement in grade level performance due to the vocational program does not necessarily imply an equal net addition to educational performance as a whole. There may be ways in which the pursuit of objectives at a lower (higher) level in a program actively conflicts with or contradicts the pursuit of objectives at a higher (lower) level in the overall context of an educational program designed to aid the disadvantaged.

2. Activities to Implement Objectives. Herein lies the development of alternative activities to pursue the objectives of the program. These activities can encompass two or more different ways of pursuing the same activity in order to achieve a given program objective. Or, they can involve two or more different activities to achieve the given program objective. In the first case, if the program objective is, for instance, to maximize the improvement in grade level performance, one may develop different curricula in order to see which curriculum, for a given cost, yields the maximum improvement in grade level. For instance, other things equal, how is knowledge of mathematics most efficiently imparted to the disadvantaged--by the teacher in person, through vocational programs, by teaching machines,or by television instruction? Or, what is the optimum size of class, other things equal, for maximizing performance on some standard performance test or set of tests. It is possible that for the disadvantaged small class size with personal attention by specially trained teachers would be least costly in terms of the additional benefits gained even though the total cost might be higher than the total cost of using, say, teaching machines. This is so because the effectiveness of a program is judged in terms of the additional or extra, not total, benefits to be gained from the additional, not total, increase in costs.

3. Specification of the Performance Index. Once activities are chosen which are related to the objectives of the program, the next problem is to develop an index or set of indices to measure performance. However, an index can only be an approximate measure of the output of the activity. What, for instance, is the output of the activity. What, for instance, is the output of a vocational high school? Is it the number of graduates? Is it the creation of educated persons? What is the nature of education as an output? Is it the ability to reason? Is it the ability to recognize and appreciate the "Good"? Clearly, the definition of the educational output is crucial, for a program or activity must be organized and defined in terms of its desired output.

To continue, what is an index for measuring educational output? If the output of education is the acquisition of a store of knowledge and the ability to reason, then performance on a standard test to measure these two components of educational output may be an appropriate index. But, again, it will be an approximate measure since it will never be conceptually nor practically flawless. For instance, no test can measure all aspects of reasoning ability or knowledge. In addition, it is difficult to distinguish between that ability to reason which is innate and that which is developed through the learning process. Finally, no test can measure ability to reason independent of one's stock of knowledge because a basic store of knowledge is needed as a frame of reference for all reasoning. It is not necessary to multiply further examples to demonstrate the complexity of this problem.

4. The Educational Production Function. The production function specifies the educational output, or outputs, the physical inputs, and the relationship between inputs and outputs, and, in some cases, interrelationships between subsets of inputs. This function or relationship should show the various combinations of inputs which can be used to produce a given level of educational output. It should also show how a given educational output increases or decreases as the relative proportion of inputs changes.

The general form of a production function is as follows:

(1) $X = f(a, b, c, d)$ where X is educational output and a, b, c, and d are educational inputs.

If the grade level improvement of disadvantaged students defines the output of a program, then the inputs could be the number of teachers of a given quality and type, number of classrooms, kilowatt hours of electricity, number of administrative staff, amounts of different supplies and so forth. Finally, this flow of educational inputs which creates the flow of educational outputs must be related to time.

5. The Cost Function. It should be possible to measure each of these inputs of the educational production function in terms of money cost. The production function of a secondary school or of any educational activity and the prices of inputs determine the cost function. For this cost function it is possible to estimate a total cost of any given activity and also, a marginal cost; that is, the extra cost of producing an extra unit of output. Thus, if output is defined as an index of performance on a standard test, and if the unit of observation is a disadvantaged student who has achieved a standard level of performance on the given test, then the total costs of achieving that level of performance can be estimated for a given number of disadvantaged students. And, given that costs are related to the student, the marginal (extra) cost of training an additional (extra) student at that level of proficiency can be estimated.

Other relationships which are not cost relationships can also be estimated. For instance, test performance or the probability of graduation or of not dropping out can be expressed as a function or expenditure per student as well as student characteristics such as sex, race, IQ, and family background and school characteristics, such as teacher quality, size of school, school location and other variables. In such an estimated relationship (again, this is not a cost function) one can calculate the net contribution of these educational inputs (as these are measured in dollars) to test performance or the probability of graduation or of not dropping out. Of course, the contribution of each of these inputs is net only in terms of the other elements expressed in the estimated relationship.

6. Relation of Costs to Benefits. If benefits are non-monetary in nature, then a target level of program performance can be set and that activity which achieves the performance target at the lowest cost (both monetary and non-monetary) is the desirable program. Or, a given cost can be set, and that program which achieves the highest performance level is the desirable program.

This simple framework for evaluating an educational activity or project, whether for the disadvantaged of any other educational population, is completely general. Given that objectives are clearly specified, alternative projects to achieve these objectives can be established. Input combinations between alternative projects will likely vary. Input combinations within a given project can be varied. The effects of these two types of variation can be noted on both output and on input costs. The combination of inputs, for a given cost, which will then maximize a given output, can then be discovered.

Unfortunately, the data needed to properly perform the analysis outlined above is not available for this study. However, a limited amount of cost-effectiveness analysis can be performed with the data at hand. Chapter V presents this analysis.

B. A Generalized Index of Program Performance

Cost-effectiveness analysis of vocational programs, as stated above, is a partial analysis simply because any given index to measure program performance only measures one or a limited number of dimensions. This study aimed to develop a more general index of program performance; that is one which measured more dimensions of a program by combining in some fashion different performance indices such as net increases in earnings, the net reduction in dropout rate, and the net increase in grade reading level. This requires standardizing the various particular indices and then assigning relative weights to each to form a composite index. Actually, in the absence of such a generalized index, it is necessary to perform a cost-effectiveness analysis of each index and then assign weights to each of these measures. Hence the emphasis may be on concentrating on maximizing the net improvement in reading improvement. To some extent, this means assigning a lower weight to net dropout rate reduction and net increase in earnings. Fortunately, there are interactions between all three of these performance goals so that the pursuit of one might simultaneously achieve the other two.

However, the statistical problems of forming such a generalized or composite index are formidable, given the time constraint and resource limitations of this study. The major stumbling blocks to the development of such an index lie in the reduction of each particular index to a standard unit of measure. If this difficulty can be overcome, the specification of weights is straight forward. They can (1) either be assigned by educational decision makers or (2) be derived empirically from the performance data themselves. In the latter case, (2), the implicit weights will show up in the process of measuring the different marginal or additional net improvements, for a given cost, to each of the particular performance indices.

C. Examples of Empirical Analysis

In light of the foregoing, it is useful to analyze two major studies of what are intended, in part, to be analyses of educational quality, since "educational quality" can be considered an educational goal. A variety of economic and statistical analysis of educational programs has been performed. Two such studies are considered here: High School Size and Cost Factors[1] and Equality of Educational Opportunity.[2]

The study by Herbert Kiesling is of interest because the analytical model he uses in the study is similar to one of those suggested below. He postulates the following model:[3]

$$Y = d_0 + d_1X_1 + d_2X_2 + D_3X_3 + d_4X_4 + e$$

where

Y_i is the measure of quality

X_1 = verbal Knowledge of Factor Score (Intelligence)

X_2 = expenditure-per-pupil in ADA

X_3 = high school size in ADA

X_4 = average value of the socio-economic index for pupils in the population for which X is applicable

e = an error term

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[1] Herbert J. Kiesling, High School Size and Cost Factors, Final Report, Project No. 6-1590, U.S. Office of Education, March, 1968.

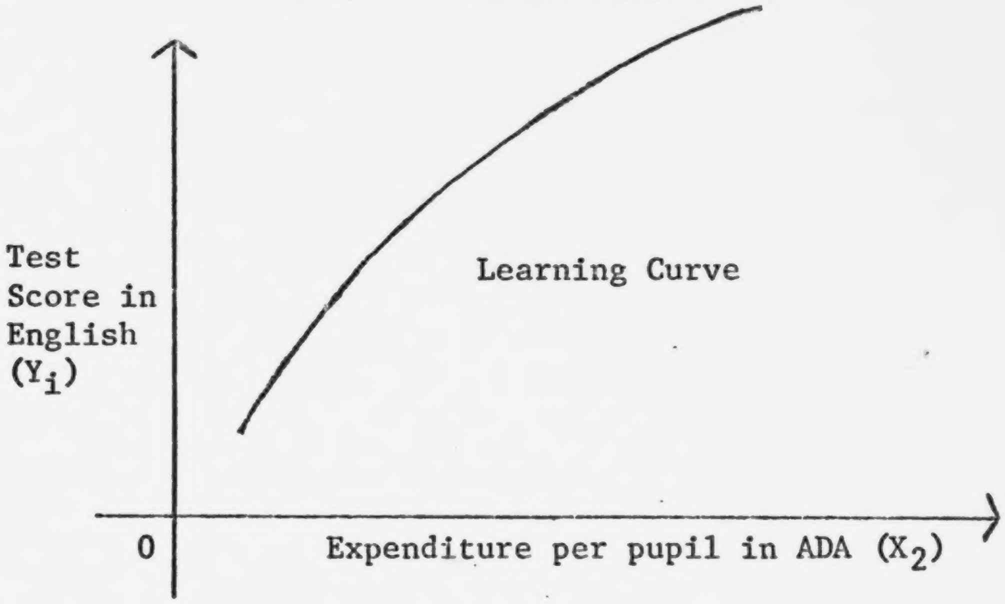
[2] James S. Coleman, et al, op. cit.

[3] Kiesling, op. cit., p.33

Kiesling argues that he is attempting to measure school quality. From a decision making standpoint, an attempt to measure "quality" by itself is not too meaningful. Assuming that extra expenditure will yield extra quality, the more important question still remains as to how much extra quality to incorporate in a program, or which program of a given quality to adopt.

However, his measures of "school quality" are of three types. One of these three quality measures are multiple choice question tests constructed along subject lines which include English, Mathematics, General School (academic subject) Aptitude and General Technical Aptitude.[4/] In general, the net relationship between his quality variable and his expenditure variable looked as indicated in Figure 1. Here, he is actually dealing with a measure of output, test performance, as an index of quality. What is shown here is that as expenditure increases, test performance increases at a decreasing rate. A way of looking at the quality problem more consistent with an economist's viewpoint is to compare relative test performance of pupils being taught by different techniques but at the same marginal cost outlay for each technique. Then, that technique having the highest relative score can be said to be more efficient or effective.

Figure 1: Hypothetical Relationship between Cost and Achievement



In short, in the strictest terms his study shows the net change in test performance for a change of a given unit of expenditure, but this does not indicate how efficient a particular school is in teaching that subject to a student. And of course, expenditure itself is not a measure of quality, since different expenditure levels may simply represent different combinations of teaching inputs among alternative techniques while saying nothing about the resulting output levels among techniques. To summarize the findings of Kiesling, the estimated relationship between test performance and expenditure appears to be linear and upward sloping,

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[4/] *Ibid.*, p. 8

though in some cases the net relationship is similar to that expressed in Figure 1. Finally, he states that:

> After allowing for these control variables (X_1, X_3 and X_4 above), it was often found...... that an additional $100 of expenditure per pupil (in ADA) was associated with between .1 and .2 of a standard deviation in the dependent variable. This is no small effect. [5/]

What does this $100 of expenditure represent? It represents the average input mix of instructional inputs for either the sample as a whole or for the sample subsets for which he estimates relationships. The reader does not know what this input mix is. And, he has no information on how changes in the input mix that can be bought for $100 will affect performance scores. Thus, his statement "This is no small effect" does not have any useful meaning. Small relative to what?

Of course, Kiesling's study is not a cost-effectiveness study, so that this criticism is, to an extent, unfair. But the criticism is not unfair to the extent that Kiesling purports to be discussing educational quality.

Further, the findings can be summarized as expressing the phenomenon that

> per pupil expenditures, books in the library and a number of other facilities and curricular measures show very little relation to achievement if the social background and attitudes of individual students and their schoolmates are held constant.[6/]

[5/] Ibid., p. 132

[6/] Samuel Bowles, and Henry Levin, "The Determinants of Scholastic Achievement - An Appraisal of Some Recent Evidence," The Journal of Human Resources, Winter, 1968, p.4 See also Coleman's reply to this critique in the Spring 1968 issue of the same Journal. Also to be published by Bowles and Levin in the Summer of 1968 issue of the same Journal is their, "Equality of Educational Opportunity: More on Multicollinearity and the Effectiveness of Schools." Forthcoming.

Thus, while different subsets of the same data set were used, the two authors come to contradictory conclusions. The difference is, in part, due to the fact that the "Coleman Report" includes a considerably large number of independent variables in the estimated equations. But, perhaps the difference is more apparent than real, since as Bowles and Levin point out, the Coleman Report finds a significant relation between achievement and teacher's characteristics. And teacher's characteristics account for 75% of the variation in teacher's salaries. And the teacher's salaries dominate the institutional expenditures category.[7]

Also, Kiesling used a dummy form for his expenditure variable, breaking expenditure into $50 ranges. The Coleman Report used a linear continuous variable form. There is some evidence that the empirical functional relationship between learning performance and expenditure is not linear. Economic theory would support this non-linear relationship on *a priori* grounds also. Thus, if Kiesling's formulation more closely approximates the true functional relationship, which it probably does, his estimations will have a higher degree of statistical significance.

Also, the manner in which the regression analysis was conducted imparted a bias to the findings on the relation between achievement and expenditure in the Coleman Report. The technique in the Coleman Report was to add each independent variable in a stepwise fashion and then display the difference between the coefficient of multiple determination for the equation with a given variable in it and the coefficient of multiple determination for the same equation but excluding the variable in question. This procedure is only valid if the set of independent variables are completely independent of each other. But such is not the case for the variables in this study. School characteristics, student characteristics, and expenditure levels are all intercorrelated. Thus, the order in which variables are introduced into the equation will affect the observed difference in the coefficients of determination. It is then possible to structure the order of independent variables so that, say, variable two which is added after variable one, but which is highly correlated with it, adds little or nothing to the explanatory value of the overall relationship. Finally, the Coleman Report does not display the partial regression coefficients so that one cannot determine the amount by which a unit of expenditure affects test performance.[8] The emphasis was on the coefficient of multiple correlation which does not give one very efficient insights into the structural interrelationships among the variables.

Neither of these two studies provides the data analysis necessary to make choices among competing educational alternatives, though the Coleman Report presents information which would tempt one (erroneously) to make economic judgments. Of the two, the Kiesling study appears to be more consistent with the needs of economic analysis.

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[7] Bowles and Levin, "The Determinants of Scholastic Achievements," *op. cit.*, p. 10.

[8] *Ibid.*

D. Summary

This discussion presented a general framework for evaluating vocational programs to aid the disadvantaged and other types of educational projects. The framework was presented in the context of economic analysis, sometimes known as systems or cost-effectiveness analysis. It can deal with efficiency problems concerning both economic and non-economic outputs. In the present study, the theoretical conception stressed the relationship between costs on the one hand and educational increments and other indices of effectiveness on the other. It also showed how this type of analysis is useful in choosing among alternative ways of maximizing effectiveness.

APPENDIX D

CRITERIA FOR IDENTIFYING AND SELECTING PROGRAMS

CRITERIA FOR IDENTIFYING AND SELECTING PROGRAMS

These are the basic criteria which guided the study. Programs selected were programs that:

1. Were oriented toward serving the disadvantaged and toward the life styles and mannerisms of the disadvantaged.
2. Give priority to the "most disadvantaged" of the disadvantaged.
3. Have relatively flexible admission requirements in terms of previous achievement, behavior and background.
4. Are not only flexible in the manner of acceptance and entry, but must clearly indicate a willingness to take problem youth such as those committed by courts, etc.
5. Serve a reasonably large number of students.
6. Aim at quality education in its program of studies which does not "lock" the student in a vocational course, but provides the opportunity for post secondary schooling and/or training.
7. Are based on the concept that students should have not only vocational educational programs but general education as well.
8. Use vocational education as a vehicle of sorts to broaden the intellectual skills of the students.
9. Are able to clearly indicate student growth and progress as a result of the program.
10. Are able to demonstrate an increase in student motivation, sense of dignity, sense of work and personal drive.
11. Have adequate school facilities to meet the special needs of the disadvantaged.
12. Have provisions for multiple rehabilitation services.
13. Have higher attendance and lower dropout rates than average programs.
14. Have quantitative data on dropouts, achievement, follow-up and behavioral indices in a readily accessible and usable form.
15. Provide training in the newer technologies.
16. Utilize the latest state-of-the-art in educational technology.

APPENDIX E

PROGRAM REFERRALS
AND
CATEGORIZATION OF PROGRAMS

TABLE XV.

NUMBER AND SOURCE OF PROGRAM REFERRALS

Sources of Referrals (1)	Number of Programs Intensively Studied (2)	Number of Programs Examined, But Not Intensively Studied[4] (3)	Total Referrals (4)
State Vocational Directors	11	30	41
Special Needs Directors[1]	4	29	33
School Superintendents	9	39	48
Research Coordinating Units	4	8	12
Vocational Education Division Staff	9	42	51
Others[2]	3	38	41
TOTALS[3]	40	186	226

[1] There was some overlap between State Directors and Special Needs Directors with one person serving as both.

[2] Foundations, literature search, etc.

[3] Some programs were referred more than once.

[4] Excludes NYC, Job Corps, and Adult MDTA programs.

TABLE XVI.

CATEGORIZATION OF PROGRAMS EXAMINED BUT NOT INTENSIVELY STUDIED

Reason for Non-Intensive Study	Number of Programs Affected
Programs serve less than 30 students	25
Programs not serving the disadvantaged	8
Programs are too new	3
Programs are not non-secondary vocational education	13
Sufficient information not available as of June 5, 1968, or better program recommended in the state	98
Leads received after closing date of June 5, 1968	39
TOTAL	186

APPENDIX F

DESCRIPTION OF 25 ELEMENTS OF EFFECTIVENESS

DESCRIPTION OF 25 ELEMENTS OF EFFECTIVENESS

The following is a discussion and analysis of common elements of effectiveness in intensively studied programs. These elements are briefly discussed in terms of the role they play in effective programs. They were identified by the program staff, the materials describing the programs, and during the site visits.

We have not included "innovative" as one of the factors for a number of reasons. The term tends to be equated with "different" and is frequently the result of a single teacher's effort, who may take "his system" with him when he leaves. If the meaning of the term "innovative" is that the school uses the latest techniques, then this is covered in several factors, and the utilization of all of these techniques in concert is itself "innovative." Finally, much of what is now called "innovative" in education is difficult to describe and may be the result of following a "fad" with a resulting limited life within the school. Consequently for these and other reasons, we have avoided using the term here, except in the context of changing institutions. It should be recognized that all of these factors are not found in all intensively studied programs.

1. Structured programming with built-in flexibility. Structured programs developed within a flexible framework provide the most suitable atmosphere for learning and social development. In conventional thinking, this would seem to be a contradiction of terms, yet the more effective programs have succeeded in making flexibility a part of the structure. The needs of both students and teachers demand a disciplined situation in which direction can be given and accepted in a climate of mutual respect and understanding. In the effective programs, the vocational educators are committed to this concept.

2. A career ladder within the vocational offerings. The vocational aspects of a program are more successful when offered in combination with pre-vocational and post-vocational programs with strong academic components. In these cases, the vocational training, per se, is part of a cycle in which the basic academic needs of the students are met. The student is introduced to job clusters, opportunity is provided for making a vocational choice, and training is offered with a view toward an expanding job market and future steps on the job ladder in the specific vocational field.

3. Teaching techniques that allow students to study and progress at their own rate of speed: use of multi-media, self-instructional, and team teaching approaches. Allowances for individualized study and progression in small classrooms--in which the student develops at his own pace--are almost mandatory, although this should not be interpreted to be a mandate for the development of unstructured programs. The successful programs are able to provide these elements within the structure of a grading system, testing, certification, etc.

4. Maximum academic class size of 20 and small school enrollments. We found that even in the automated classroom, there is a need for someone to monitor the student's progress and to motivate each of them to learn about the particular subject. This face-to-face relationship is an

essential element in the process. When a class or school enrollment is too large, this relationship tends to decrease. Even more important, however, is that the teacher is unable to offer that measure of individual attention which seems so necessary with the disadvantaged.

5. Academic studies integrated with vocational studies. We heard innumerable times that academic studies integrated with vocational studies were important success elements. Quantitatively we could not demonstrate this. However, the face value is high and all successful programs had this element.

6. Pre-vocational programs which provide opportunity for exploring different occupations. Along with the trend to extend preparation for the "world of work" down into the middle and primary grades has come a recognition in some programs that such exposure include "hands on" sensory experiences for a wide range of occupations. The availability of choices is very much related to the holding power of a school.

7. Equipment and facilities keyed to actual requirements for entry-level work in the vocational fields. A wide range of modern teaching devices and the latest equipment and facilities are desirable, but not necessary. Success with techniques such as team teaching and multi-media approaches, e.g., newspapers as major texts used without large expenditures. The crucial element remains the desire of the teaching staff to teach the disadvantaged.

8. Periodic up-dating of skill offerings, equipment, and teaching materials through consultation with local industry and vocational consultants. Most of the effective programs do not operate in a vacuum. They are closely keyed to the state-of-the-art in education and fully utilize consultants and industry advisory councils.

9. Orientation in social skills, self-perception, and life attitudes. There is now an increasing awareness in the schools that it is not enough to teach certain skills, but that students also need to know how to live by themselves and with others. Making a student comfortable in dealing with all social strata is one of the most effective elements in a successful program.

10. Articulation of eleventh and twelfth grades with pre-vocational and post-vocational training. Since intensive training in a specific skill area is delayed until the last two years of high school, and the majority of those who are enrolled will be expecting to enter the labor market upon graduation, the student is considered to be ready for a job by the time he reaches this point. To expect him to repeat much of this training, if he elects instead to enroll in a community college that offers a course in the same field, is not an efficient use of resources, unless the college courses devote a major effort toward covering new material that was omitted from the high school level courses. Only one or two programs contained good articulation of training at all levels. Piecemeal approaches are more common, e.g., starting with a pre-vocational and then building a vocational program. All programs give lip service to this concept but are hindered by lack of funds to implement total programs.

11. Opportunity to earn while learning; students receive credit for work experience. For the student, the great attraction of work-study programs is that he attains adult status, his school day is more interesting, and he can earn while learning. Moreover, the student has an opportunity to experience what a real job is like. In some programs, educators appreciate the fact that important learning occurs outside as well as within the classroom. The new attitude of rewarding life experiences by granting academic credit reinforces the idea that experience itself is a teacher, and that the separation between learning and doing is quite artificial.

12. One or two key people who make the program "go" and set the "climate." We found that programs did not function well--even relatively underfinanced ones--unless there were one or two key people involved. The characteristics of good key people probably cannot be quantified or measured objectively except to state that they are very good salesmen, they work long hours, they are not overly authoritarian, they are open to ideas, and they are committed.

13. Maximum vocational class size of 15 without "watered-down" standards. Effective vocational instructors arrange their schedule and work stations so that small groups of students are cycled through a particular training task with each student required to perform all of the skills by himself without assistance. It is difficult to handle groups of larger than 15 students without watering down standards. The disadvantaged need more individual attention and supervision than do the non-disadvantaged.

14. Strong counseling support, use of multi-agency services, extra-curricular activities and system of rewards and incentives. The area of supporting services contains a number of sub-elements that are important. First, is the number and types of counselors. We found that vocational instructors with practical experience are slightly better than academic teachers and some counselors in relating to the disadvantaged. The number of counselors and their ability to quickly detect and correct a problem were also important. Second, programs which provide multi-agency support can correct health and welfare needs better than those without such support. Finally, a system of extra-curricular activities and awards builds school spirit and positive identity among the disadvantaged.

15. High employment placement record, based upon teacher recommendation and/or special efforts involving use of school personnel to develop jobs. Follow-up surveys show that graduates of vocational programs obtain more jobs through referrals by their instructors than any other single source. The best placement services involve a school person making referral to the employer since the school knows the student best and is more likely to stimulate the student's interests. Unfortunately, most schools cannot afford to employ full-time placement people, and consequently, it becomes a sideline for teachers and counselors alike. The questions is how seriously does the faculty take this "sideline," if, in fact, it is a sideline? In effective programs, we found that the staff spent much of their non-instructional time in this activity. In the best program, this activity was often supplemented by trained placement specialists.

16. Extended school day and/or school year. Adding extra hours to the school day can be expensive, and is not always popular. However, several effective programs actually do this with student approval. In programs for former dropouts or those linked to work experience programs, motivation is often strong enough to justify extra class hours on a voluntary basis. Sometimes, older students are paid to tutor younger students outside the regular school hours. The important thing is the schools' willingness to accommodate the student who is eager to learn.

17. A mix of disadvantaged with non-disadvantaged; integration of achievers with non-achievers, including the retarded. Some progress has been made in establishing special education classes for the disadvantaged mentally retarded within the public schools. In general, the cost of educating these groups has been greater due to smaller classes and the need for specially trained teachers. The evidence is that the mixing of the mentally/functionally retarded, the slow learner, and the potential dropout, with regular students (especially adults or former dropouts) is a highly effective motivational element. However, this has to be done in small classes where a one-to-one relationship can develop and training is individualized.

18. Non-punitive, systematic achievement measurement programs. There seem to be differences in opinion over whether tests are useful instruments for measuring student progress. Yet, as pointed out elsewhere, effective programs measure student achievement in all areas. They do this in non-threatening ways by avoiding normative comparisons--choosing to evaluate a student's progress against earlier benchmarks.

19. Involvement of students, parents, and community with schools in order to attract the disadvantaged, and to quickly correct problems. We found that children learn from other children about the merits of a particular program. If placement rates are high, if the work experience program gets students good jobs, if students in the program have status and if students leave the program for post-graduate training, then there will be more demand for enrollment than openings. In addition, we found that if the education the children are receiving is not perceived by the parents or the community as having value, it is difficult to get support. The best programs maintain an open door, quickly correct problems as they arise, and are willing to listen to the voice of the student, parent and community.

20. Racially integrated faculty in programs with sizable minority enrollment, indigenous teacher aides, and emphasis on indigenous culture of the disadvantaged population. We found that there was less resentment and a better feeling among and between staff and students when minority groups were well represented on the faculty. This also applies to programs where indigenous teacher aides were employed and where the positive values in the culture of the disadvantaged population were emphasized.

21. Positive and youthful teacher attitudes toward the disadvantaged student combined with previous teaching experience. Inexperienced teachers tend to fare poorly when faced with a disadvantaged group for the first time.

The best teachers tend to have a youthful attitude and strong social service needs. They are also firm but friendly and give and command respect. They tend to be "people oriented" rather than subject matter oriented.

22. Good teacher-principal relations, with emphasis on supportive role of supervision. One common factor we found in effective programs was the manner in which program coordinators supported their staff. Their doors were open, they encouraged the free flow of ideas, and they could accommodate flexibility-inflexibility among their staff. Our view is that an administrator who is supportive will inspire teachers to put forth their best efforts.

23. System of feedback, based on student performance on job, with resulting impact on curriculum. Many of the programs (expecially the smaller ones) could report placement rates. As a group, the best programs overall were those for the retarded. One reason was that they established liaison with employers in order to follow-up their graduates and improve their programs.

24. Aim of program is broad behavioral change and growth. We found that effective programs are involved in more than job training *per se*. They are aimed at broad behavioral changes in which job placement and personal and social growth are emphasized.

25. Treating disadvantaged groups positively as special groups with unique and desirable attributes. We found a number of instances where students improved their achievement when they felt that somebody was paying attention to them. This is simply a "Hawthorne-type effect." Its role should not be underestimated in any program.

APPENDIX G

LIST OF SCHOOLS EXAMINED BY STATES

LIST OF SCHOOLS EXAMINED BY STATES

School or School System Name	City
Alabama	
Talladega County Training School	Talladega
Alaska	
Hoonah Public School	Hoonah
Kodiak Island Borough Regional High School	Kodiak
William E. Beltz Vocational School	Nome
Arizona	
Phoenix Union High School	Phoenix
Rough Rock Demonstration School	Chinle
Tucson Vocational Training & Ed. Central	Tucson
Arkansas	
Dermott High School	Dermott
Hope High School	Hope
Little Rock Public School System	Little Rock
Valley Springs High School	Valley Springs
California	
Alain Locke Senior High	Los Angeles
Armijo High School	Solano County
Compton Union High School	Compton
District Occupational Center	Dinuba
District Occupational Center	San Diego
Dominquez High School	Compton
FEAST, Pittsburg High	Pittsburg
FEAST, Ravenswood High	Redwood City
Freemont High School	Los Angeles
Fresno City Unified School District	
Edison High School	Fresno
Huntington Beach High School District	Huntington Beach
J. O'Connell School San Francisco	San Francisco
John Adams Vocational School	San Francisco
Jordon High School	San Francisco
Los Angeles Unified School District	Los Angeles
Los Angeles Special Saturday Program	Los Angeles
McKinley Continuation High School	Berkeley
Mid-City Occupational Center	Los Angeles
North View High School	Corvina
Oakland Technical High School	Oakland
Polytechnical High School	Long Beach
Richmond School District	Richmond
Riverside Unified School District	Riverside

School or School System Name	City
California (cont.)	
Samuel Gompers Continuation School	San Francisco
San Diego School System	San Diego
San Francisco Unified School District	San Francisco
Stockton Unified School District, Franklyn, Edison, Stagg & Snyder Schools	Stockton
San Mateo School District	San Mateo
West Valley Occupational Center	Woodland Hills
Colorado	
Aurora Public Schools	Aurora
Centauri High School	La Jara
Golden High School	Golden
Mapleton High, Occupational Work Experience	Denver
Metropolitan Youth Education Center of the Denver Public Schools	Denver
Mountain View Girls School	Morrison
Palmer High School	Colorado Springs
Connecticut	
Albert I. Prince Technical School	Hartford
Bridgeport School System	Bridgeport
Center for Vocational Arts	Norwalk
Hartford Public High	Hartford
Rockville High School	Rockville
Woodrow Wilson High School	Middletown
Delaware	
Brandywine Springs Junior High School	Wilmington
Brown Area Technical-Vocational School	Wilmington
District of Columbia	
Cardozo	Washington
Chamberlain Vocational High School	Washington
Stonecrest School	Washington
Florida	
Alachua County Public School	Gainesville
Booker T. Washington Junior High School	Miami
City Center for Learning	Clearwater
Douglas McArthur School	Miami
Manatee Area Vocational & Technical Center	Brandenton
Parkland School	Clearwater
Pinellas County Board of Public Education - City Center for Learning	North Largo
Seminole High School	North Largo
Georgia	
Atlanta School System	Atlanta
Chamblee High School	Decatur
Howard High School	Atlanta

School or School System Name	City
Georgia (cont.)	
Marietta-Cobb Area Vocational-Technical School	Marietta
Idaho	
Vallivue Senior High School	Caldwell
Vocational-Technical Education	Pocatello
Illinois	
Aurora East High School	Aurora
Chicago Vocational High School	Chicago
Community High School, Marengo Community High School	Marengo
Mt. Prospect High	Mt. Prospect
Northern Cultural Center	Chicago
Quincy Senior High School	Quincy
Senn High School	Chicago
Thornton Township High Schools	Harvey
Washburn Trade School	Chicago
Indiana	
Bosse High	Evansville
Central High	Evansville
Gary School System	Gary
Mount Vernon High School	Mount Vernon
Portland High	Portland
Southport High	Southport
Iowa	
Davenport School System	Davenport
Des Moines School System	Des Moines
North High School	Des Moines
Sioux City Public School	Sioux City
Kansas	
Wichita Public School District	Wichita
Kentucky	
Fayette County Schools	Fayette County
Paducah School Board	Paducah
Louisiana	
Lowery High School	Donaldsonville
Maryland	
The Carrollton School	Baltimore
Croom Vocational	Prince George's County
Fairmont Hill Vocational School	Baltimore
Granville T. Woods Vocational School	Baltimore
Jane Addams Vocational School	Baltimore
Samuel Gompers Vocational School	Baltimore
Woodrow Wilson General Vocational School	Baltimore

School or School System Name	City
Massachusetts	
Arnold Hall Academy	E. Pembroke
Dracut High School	Dracut
East Boston High School	Boston
Lewis Junior High School	Roxbury
Pittsfield Public School District	Pittsfield
Quincy School System	Quincy
Michigan	
Ferndale High School	Ferndale
Hamaday House	Flint
H. Marta Jardon Vocational Education Center	Ferndale
Northwestern High School	Detroit
Pontiac Central High School	Pontiac
Portage Central High School	Portage
Portage Northern High School	Portage
Washington Trade School	Detroit
Wilbur Wright Cooperative High School	Detroit
Minnesota	
Anoka Rehabilitation Center	Anoka
Minneapolis Work Opportunities Center	Minneapolis
Orr & Cook High School	Orr
St. Paul Special School	St. Paul
Mississippi	
Henry Weathers High School	Rolling Fork
Hinds County Agricultural High	Utica
Lanier Junior-Senior High School	Jackson
Rogers Junior-Senior High School	Canton
Missouri	
Lincoln High School	St. Louis
Pasco High School	Kansas City
Montana	
Missoula Technical Center	Missoula
Nebraska	
Lincoln School System	Lincoln
Nevada	
Southern Nevada Vocational-Technical Center	Las Vagas
Tonopah High School	Tonopah
New Hampshire	
New Hampshire Vocational Institute	Berlin
New Jersey	
Iselin Junior High School	Iselin
John F. Kennedy Memorial High	Iselin

School or School System Name	City
New Jersey (cont.)	
Newark School System	Newark
Bridgeton High School	Bridgeton
South Brunswick High School	South Brunswick
New Mexico	
Gallup High School	Gallup
Hobbs Municipal School	Hobbs
Ramah High School	Ramah
Shiprock High School	Shiprock
Thoreau High School	Thoreau
Zuni High School	Zuni
New York	
New York School #1	New York City
Buffalo Public School System	Buffalo
Central Technical High School	Syracuse
GROW, Board of Cooperative Education Service	Westchester County
Hempstead High School	Hempstead
New York School #2	New York City
Oceanside Technical School	Oceanside
Rochester School System	Rochester
Service Occupations School	Syosset
Tri-County Area Center of Occupational Education	Johnstown
Vocational Education & Extension	Mineola
North Carolina	
Forsyth County School System	Winston-Salem
Mecklenberg County School System	Charlotte
Wake County School System	Raleigh
Ohio	
Akron School System	Akron
Columbus School System	Columbus
Dayton School System	Dayton
Lancaster High School	Lancaster
Mahoning Valley Vocational School	Vienna
Paul C. Hayes Technical Training School	Grove City
Penta County Vocational School	Perrysburg
Thomas A. Edison Occupational School	Cleveland
Toledo City School System	Toledo
Warren Cooperative Occupational Training Program - Market High School	Warren
Oklahoma	
Central High School	Oklahoma City
Oklahoma City Public School	Oklahoma City
Pennsylvania	
Allentown School System	Allentown

School or School System Name	City
Pennsylvania (cont.)	
Brookville Area High School	Brookville
Cleveland Board of Education	Cleveland
Erie School System	Erie
The E. S. Miller School	Philadelphia
Hershey Boy's School	Hershey
Philadelphia Youth Development Treatment Center	Philadelphia
Simon Gratz High School	Philadelphia
W. B. Saul High School	Philadelphia
Westinghouse High School	Pittsburgh
Puerto Rico	
Centro des Opportunidades Educativas	San Juan
Rhode Island	
Vocationally Oriented Basic Education Center	Providence
South Carolina	
Greenville County School System	Greenville
Richland County School System	Columbia
Southside Area Vocational Center	Florence
Union High School	Union
South Dakota	
Sioux Falls School System	Sioux Falls
Tennessee	
Chattanooga School System	Chattanooga
Memphis School System	Memphis
Nashville-Davidson County School	Nashville
Texas	
Alamo Heights School Board	San Antonio
Corpus Christi School System	Corpus Christi
Dallas Vocational School	Dallas
Fort Worth Public Schools	Fort Worth
Houston Public School System	Houston
El Paso School System	El Paso
Lockhart Junior High School	Lockhart
McAllen High School	McAllen
San Antonio School System	San Antonio
Utah	
Bountiful High School	Bountiful
Salt Lake City - Granite County	Salt Lake City
Aneth Boarding School	Aneth
Vermont	
Mt. Anthony Union High School	Bennington

School or School System Name	City
Virginia	
Arlington County School System	Arlington
Campostella Junior High School	Norfolk
Henrico County School System	Richmond
Norfolk School System	Norfolk
Richmond School System	Richmond
Washington	
Highline County School System	Seattle
Pacific Pre-Vocational School	Seattle
Rainier Beach Junior-Senior High School	Seattle
West Virginia	
Kanawha County School System	Charleston
Mount Hope Vocational Unit	Mount Hope
Wood County School System	Parkersburg
Wisconsin	
Milwaukee Vocational Technical & Adult School	Milwaukee

APPENDIX H

RELATIONSHIP BETWEEN FACTORS OF EFFECTIVENESS AND CASE STUDIES

TABLE XVII.

RELATIONSHIP BETWEEN FACTORS OF EFFECTIVENESS AND CASE STUDIES*

CASE STUDIES	FACTORS OF EFFECTIVENESS 1/																								
	1. Structured Programming/ Flexibility	2. Career Ladders	3. Team Teaching, Individualized Instruction	4. Small Enrollments (Academic)	5. Integration of Voc. & Academic Courses	6. Pre-vocational Exploration	7. Adequacy of Equipment and Facilities	8. Updating of Offerings	9. Stress on Social Skills	10. Pre & Post-Vocational at 11th & 12 Grades	11. Work-Study	12. Key Leadership	13. Small Vocational Enrollments	14. Effective Counseling & Social Services	15. Effective Placement	16. Extended School day and Year	17. Enrollment/Advantaged and Disadvantaged	18. Non-punitive Student Measurement	19. Parent, Community & Student Involvement	20. Integrated Faculty	21. Positive Teacher Attitudes	22. Good Teacher-Principal Relations	23. Feedback of Student Performance	24. Program Emphasis on Behavioral Changes	25. Stress on Uniqueness of Disadvantaged
Case #1 (Page 21)	X						X						X				X	X							
Case #2 (Page 185)				X												X					X				
Case #3 (Page 26)	X		X			X	X		X		X	X							X						
Case #4 (Page 149)																								X	X
Case #5 (Page 192)													X			X									X
Case #6 (Page 157)						X					X								X						X
Case #7 (Page 31)	X	X			X	X		X	X	X						X									X
Case #8 (Page 165)										X												X		X	
Case #9 (Page 42)	X	X			X									X										X	X
Case #10 (Page 48)			X								X						X							X	
Case #11 (Page 174)	X	X		X							X														
Case #12 (Page 55)						X																		X	
Case #13 (Page 61)		X						X												X	X		X		
Case #14 (Page 115)			X	X	X				X									X	X		X			X	
Case #15 (Page 73)	X		X																			X			
Case #16 (Page 84)	X	X				X							X											X	
Case #17 (Page 125)				X	X							X						X							
Case #19 (Page 89)											X		X												
Case #21 (Page 130)			X										X											X	
Case #25 (Page 95)													X				X	X					X		
Case #26 (Page 135)			X											X	X			X		X	X	X		X	
Case #29 (Page 141)																	X		X						
Case #32 (Page 199)																			X	X		X			
Case #34 (Page 100)												X										X			
Case #35 (Page 103)															X				X						
Case #36 (Page 109)	X		X	X							X	X													
Case #37 (Page 145)	X															X	X	X					X		
Case #38 (Page 180)							X													X		X			
Case #39 (Page 73)	X		X																			X			
Case #40 (Page 73)	X		X																			X			

1/ Factors of effectiveness are explained and listed throughout the report. The most thorough explanation is on pages 221-223.

*NOTE: This matrix does not imply any qualitative judgment on the relative merits of the various case studies. That is, the absence or presence of factors of effectiveness among the case studies does not mean that one case is better or worse than another.